THE IMPACT OF OPERATIONS TEMPO (OPTEMPO) ON INTENTIONS TO DEPART THE MILITARY. DOES THE INCREASE OF OPTEMPO CAUSE ACTION?

THESIS

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Abstract

Recent information in the field of Operations Tempo (OPTEMPO) has resulted in conflicting information on its effect on turnover intentions. This study evaluated the August 2004 Status of Forces Survey to determine if the sample demonstrated OPTEMPO had a curvilinear effect on turnover intentions when accounting for the moderators job satisfaction and organizational commitment while controlling for rank and gender. Linear regressions were used to determine if the relationship between OPTEMPO and turnover intentions were significant. When accounting for job satisfaction and organizational commitment the relationship between OPTEMPO and turnover intentions is not significant, this indicated that OPTEMPO and turnover intentions do not have a curvilinear relationship. The findings of this study led to further research questions which implied that the sample demonstrated a slight significant relationship between OPTEMPO and turnover intentions. Overall, the study demonstrated that the relationship between OPTEMPO and turnover intentions in the presence of job satisfaction and organizational commitment is not significant and has no impact.

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Nathan P. Olsen

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CHAPTER 1

INTRODUCTION

Turnover, defined as the act of an employee leaving an organization, is currently

assuming crisis proportions for many employers who struggle to retain people in their

organization (Griffeth & Hom 2001). Griffeth and Hom (2001) also stated that researchers

project the cost of one turnover incident in the private sector ranging from between 93% and

200% of a leaver's salary. Because of the costs associated with turnover, both public and private

organizations are doing all they can to minimize the loss of their employees (Holt, Rehg, Lin, &

Miller, 2007). The military is not immune to the tremendous cost of turnover as the Government

Accounting Office review reported approximately 62% of enlisted personnel and 40% of officers

intend to leave the military once their active duty service commitment is complete (Huffman,

Adler, Dolan, & Castro 2005). Also, a recent report released by Air Force Personnel Center

(2006) reported the Air Force lost 79% of those pilots who were eligible to separate or retire in

2006 (Rated Officer Retention Analysis, 2006).

To help alleviate the damage experienced from turnover, the Department of Defense has

incurred significant costs in training and recruiting. For example the initial screening and

training given to Air Force officers exceeds $300 million annually and is increased dramatically

when the skills taught become more specialized (i.e., pilots) (Holt et al., 2007). In addition, the

cost of retraining one, non-rated, active duty Air Force officer ranges from $17,180 to $181,056

(Air Force Instruction 65-503, 2007). In addition, the cost of retraining one enlisted member of

the Air Force ranges from \$3,499 to \$249,768 (Air Force Instruction 65-503, 2007). Because turnover and the costs incurred due to turnover have reached such dramatic levels, it is important to understand why it occurs.

Increasing amounts of military members are choosing to leave the Armed Forces. In the past year alone the Armed Forces have reduced their overall total force by over 8,000 members (Active Duty Military Strength Report, 2007).   One of the common explanations for leaving the military is the increase in military operations also known as operations temp (OPTEMPO) (Huffman et al. 2005). OPTEMPO is a military term that became popular in the early 1990s when the military experienced a severe drawdown and an increase in military operations (Castro & Adler, 2005). As the military continues to downsize, the OPTEMPO is likely to increase, therefore it is important to determine the effect of OPTEMPO on voluntary turnover (Reed & Segal, 2000).

Previous studies on the impact of OPTEMPO on military turnover have generated inconsistent findings (Huffman et al. 2005). Some findings have indicated a high OPTEMPO is consistent with a greater intention to leave (e.g., Giacalone, 2000; Sullivan, 1995), while other findings have noted the opposite effect (e.g., Castro, Huffman, Adler, & Bienvenue, 1999; Reed & Segal, 2000). Huffman et al. (2005) examined the effects of OPTEMPO on soldier and unit readiness in the United States Army Europe. The study was based on data collected from May 1999 to January 2001 and focused on the effects of OPTEMPO on intent to turnover. The intent of this study is to evaluate the effects of OPTEMPO on intent to turnover in the United States Air Force using secondary data from the 2004 Status of Forces Survey of Active-Duty members (Defense Manpower Data Center, 2004).

CHAPTER 2

LITERATURE REVIEW

Preface

The fundamental concepts involved in the development of a modified turnover and

OPTEMPO model are elaborated on in the following literature review. First, models and

research in the area of turnover will be introduced in chronological order, followed by a

discussion of the concept of OPTEMPO. In addition, the moderating variables of organizational

commitment and job satisfaction will be discussed. Finally, the predicted effects of OPTEMPO

on turnover intention will be presented, and the chapter will conclude with the study hypotheses

to be evaluated.

Turnover

Employee turnover has been a subject of immense interest to employers and

organizational scholars. Studies on turnover began to emerge in the early 1900s with the studies

of Bernays (1910) and Crabb (1912), and have continued into the present with over 1,000 studies

being performed (Mowday, Porter, & Steers, 1982). Managers and scholars have been interested

in employee turnover due to the incredible costs incurred when an employee leaves an

organization (Hom & Griffeth, 1995). Many of the studies have focused on modern conceptual

developments, describing and evaluating various theoretical frameworks for understanding

turnover (Hom & Griffeth, 1995).

Griffeth, Hom, and Gaertner (2000) identified six proximal precursors in the withdrawal

process as the best predictors of turnover. These predictors included job satisfaction,

organizational commitment, job search, comparison of alternatives, withdrawal cognitions, and

quit intentions. Further, researchers have empirically demonstrated that individuals tend to

consider departing an organization before leaving (e.g., Bluedorn, 1982; Mobley, 1977; Steers & Mowday, 1981). Research has also supported the prediction that job satisfaction, organizational commitment, and job search activity precede intent to turnover (e.g., Bluedorn, 1982; Mobley, 1977). Despite the significant attention given to such variables in management literature, results from a meta-analytic review of turnover antecedents, as reported by Griffeth, Hom, and Gaertner (2000), indicated only 4 to 5% of the variance regarding antecedents of employee turnover was accounted for by attitudinal variables; thus, additional research is warranted.

Numerous definitions of turnover have been proposed, but a vast majority of the definitions focus on movement from an organization. Price (1977) defined turnover as movement across membership boundaries of a social system. Mobley (1982) refined the definition of turnover to focus on employees of an organization and defined turnover as a voluntary cessation of membership in an organization.

Early research on turnover did not focus on whether or not the reason for termination was voluntary or involuntary. Price (1977) felt that in order to accurately measure turnover, studies needed to differentiate between voluntary and involuntary terminations. Price (1977) defined voluntary turnover as movement across the membership boundaries of a social system initiated by the individual. Hom and Griffeth (2001) simplified the definition even more by saying that voluntary turnover meant employees chose freely to leave the job. Hom and Griffeth (2001) also defined involuntary turnover as employer-initiated job separations over which leavers have little or no personal say. For the purpose of this study turnover will be defined as an individual who voluntarily chooses to resign their position in the Armed Forces.

Voluntary turnover can be considered in two categories, functional and dysfunctional. Functional turnover represents the loss of employees that are considered substandard, and is

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considered a benefit to the organization because the employee will most likely be replaced by a better worker (Hom & Griffeth, 1995). In contrast, dysfunctional turnover represents the loss of effective performers (Hom & Griffeth, 2001). When dysfunctional turnover exists, the employee is apt to be replaced by an employee that is of lower caliber (Hom & Griffeth, 1995).

The first formal theory on turnover was proposed by March and Simon (1958). March and Simon (1958) conducted an explicit, formal, and systematic analysis of the process of turnover (Hom & Griffeth, 1995). In their book, *Organizations,* March and Simon proposed the Barnard-Simon theory of organizational equilibrium. The theory focused on motivation of employees, and how motivations can induce members to continue participation in the organization (March & Simon, 1958). The theory suggested that each member will participate as long as the inducements, such as pay, match or exceed the employee's contributions. The focus of the employee and the organization is to reach a state of equilibrium between inducements and contributions (Hom & Griffeth, 1995). If the employee feels that their contributions are being matched by the inducements then there is no desire to leave the organization.

March and Simon (1958) hypothesized the inducements-contributions balance is a function of two major components: the perceived desirability of leaving the organization and the perceived ease of movement from the organization. The primary factor affecting perceived desirability of movement is employee satisfaction with the job. The greater the employee's job satisfaction, the less likely there will be a perceived desirability to leave the organization (March & Simon, 1958). The organizational equilibrium theory suggests there are three sources of job satisfaction: "(a) conformity of job characteristics to self-image; (b) increased predictability of instrumental relationships on the job, and (c) the greater the compatibility of work requirements with the requirements of other roles" (March & Simon, 1958, p. 114).

Perceived ease of movement from the organization is influenced by the state of the economy. If the economy is good and job alternatives are plentiful, then turnover is high. With this thought in mind, March and Simon (1958) proposed that the greater the number of perceived extraorganizational alternatives the greater the perceived ease of movement will be. Extraorganizational alternatives are also increased based on the personal attributes of the individual, the company's prestige, the size of the organization, and the number of outside associations or organizations to which the individual belongs. For an illustration of March and Simon's (1958) combined model of motivation, refer to Appendix A, Figure A1.

Insert Figure A1 about here

March and Simon's work on turnover has inspired numerous theorists to refine their models of turnover. Their work shaped much of the prevailing thinking about the concept of turnover (Hom & Griffeth ,1995), and the inducements-contributions model represented a significant advance in the field (Mowday, Porter, & Steers, 1982). Many years elapsed before another theory on turnover emerged (Hom & Griffeth, 1995).

Several years after March and Simon's turnover model was introduced, Vroom (1964) performed a partial review of the turnover literature. His modest review of the literature found a consistent relationship between job dissatisfaction and turnover (Mowday, Porter, & Steers, 1982). Vroom (1964) suggested that the probability of an individual leaving was a function of the difference in strength between two opposing forces. The opposing forces in Vroom's model were the forces to remain at the organization and those forces to leave. The forces to remain at the organization were determined by the level of job satisfaction the individual had. The force to leave was influenced by the outcomes the individual cannot obtain without leaving the

organization and the expectancy that the outcomes can be achieved somewhere else (Mowday, Porter, & Steers, 1982). The model did not receive much recognition because it was based on a small sample size of seven studies.

A new turnover theory emerged in 1973 when Porter and Steers felt met expectations were the central determinant of decisions about turnover (Hom & Griffeth, 1995). Employees receive many benefits from an organization; despite the benefits obtained individuals have a distinct set of expectations. If an organization does not meet the expectations of the individual, job satisfaction will decrease and the probability of turnover will increase. Porter and Steers (1973) viewed this as a process of balancing perceived or potential rewards with desired expectations. Thus, Porter and Steers (1973) proposed a causal sequence where unmet expectations lead to job dissatisfaction which lead to turnover (Hom & Griffeth, 1995).

Porter and Steers (1973) also proposed four general categories in the organization which were believed to affect withdrawal. Evidence suggested that important influences on turnover could be found organization wide (e.g. pay and promotion policies), in the immediate work group (e.g. size, supervision, and coworker relations), in content of the job (e.g. job requirements), and in personal information (e.g. age and tenure). Despite the great strides made in the field of turnover, Porter and Steers (1973) felt that fairly obvious voids existed. They felt that more emphasis needed to be placed on the psychology of the withdrawal process, and more information was needed on how the actual decision to turnover was made (Porter & Steers, 1973).

The year 1977 was an exceptional year for research on turnover. Three highly influential works were published in the year 1977, to include: (a) Price (1977); (b) Forrest, Cummings, and Johnson (1977); (c) and Mobley (1977) (Mowday, Porter, & Steers 1982). The first major work

to be explored is the work of Price (1977). Price (1977) completed a comprehensive review of

turnover literature in which he evaluated the various ways turnover was defined and measured.

After his extensive review, Price (1977) defined turnover as the degree of individual movement

across the membership boundary of a social system. In addition, he used his findings to develop

a model which incorporated the variables shown to be important in his review (Mowday, Porter,

& Steers, 1982). The central variable of his model was job satisfaction, which was influenced by

pay, integration, instrumental communication, formal communication, and centralization. Also,

the availability of job alternatives is believed to moderate the relationship between satisfaction

and turnover (Hom & Griffeth, 1995). Refer to Appendix A, Figure A2 for an illustration of

Price's causal model of turnover.

Insert Figure A2 about here

In addition to his proposed turnover model, Price (1977) was credited with numerous

landmark contributions to the field of turnover. He identified a comprehensive set of

determinants of turnover, unlike the more speculative theorists before him (Hom & Griffeth,

1995). Price (1977) also considered the impacts of turnover on the organization. He concluded

that turnover had impact on seven organizational variables, to include: effectiveness;

administrative staff; formalization; integration; satisfaction; innovation; and centralization. The

new concept of turnover impact provided examples of turnover facilitating effectiveness (e.g.

increased innovation) and examples of turnover facilitating ineffectiveness (e.g. lower

satisfaction, increased innovation) (Mowday, Porter, & Steers, 1982).

Forrest et al. (1977) also completed a review of the turnover literature and recognized

that most of the existing literature used job satisfaction and met expectations to predict future

behavior by employees (Forrest et al. 1977). He proposed an alternative model that focused on predicting an individual's behavior based on the individual's anticipated affective responses to future events. Forrest et al. (1977) hypothesized that individuals will choose the path with the most positive anticipated satisfactions (Forrest et al., 1977).

Focusing on the suggestion from Porter and Steers (1973), Mobley (1977) evaluated the psychology of the withdrawal process. Unlike his predecessors, Mobley (1977) suggested several of the possible intermediate steps in the turnover process. His research provided evidence that most turnover studies dealt with the direct relationship between job satisfaction and turnover. The model created by Mobley (1977) suggested a number of possible mediating steps between dissatisfaction and actual turnover. The model proposed that job dissatisfaction stimulates the thoughts of quitting, which inspires the individual to evaluate the chances of finding comparable work and the individual turnover costs. If the turnover costs are not too excessive, the individual will have intent to search for another job which will lead to active searching. After alternative work has been identified, the individual will compare it with their current job. When the job alternatives are found to be more attractive, the individual will be motivated to quit (Hom & Griffeth, 1995).

Mobley (1977) introduced the concept that behavioral intention to leave is the primary reason for turnover, even more important than the concept of job satisfaction (Mowday, Porter, & Steers, 1982), because of these unique claims, Mobley (1977) is said to dominate all work on psychological approaches to turnover (Hom & Griffeth, 1995). Significant research has been conducted on the model proposed by Mobley (1977). The amount of mixed findings about his research has inspired a development of a number of alternative models (Hom & Griffeth, 1995).

The model developed by Mobley (1977) illustrating the intermediate linkage involved in turnover is provided in Appendix A, Figure A3.

Insert Figure A3 about here

After the initial model proposed by Mobley (1977), he conducted a review of the literature and concluded evidence was present that supported the existence of several variables in determining turnover (Mowday, Porter, & Steers, 1982). The variables identified by Mobley, Griffeth, Hand, and Megilo (1979) included age, tenure, overall satisfaction, job content, intention to stay, and organizational commitment. This review provided the basis for a heuristic model demonstrating many indirect and direct influences on turnover (Hom & Griffeth, 1995). Similar to the earlier model, the researchers proposed quit intentions as the main precursor to turnover. Further research by the team provided information in support of job satisfaction, expected utility of the present work role, and expected utility of alternative work roles as a function of turnover. The model was unique because it proposed that the individual's expectations played an important role in the turnover decision process (Mowday, Porter, & Steers, 1982).

At this point, the literature on turnover had increased to such a level it was important to conduct a meta-analysis of the existing literature. Muchinsky and Tuttle (1979) reviewed over 150 studies from the preceding 50 years. Each of the studies was grouped into categories based on common predictor variables. The five general categories used were; attitudinal factors, biographical factors, work-related factors, personal factors, and test-score factors (Mowday, Porter, & Steers, 1982). Muchinsky and Tuttle's (1979) research into the studies found strong

support for the importance of realistic job previews and of met expectations in the reduction of turnover.

The review preformed by Muchinsky and Tuttle (1979) led to the creation of a model by Muchinsky and Morrow (1980), the model focused on economic determinants, such as employment rates and opportunity to obtain work, as immediate precursors of turnover. The researchers felt that an individual would not leave his job unless there were alternative job opportunities. When alternatives are not present, employees that are dissatisfied are more likely to stay in their current situation.

Steers and Mowday (1981) advanced the research on turnover by proposing a model that integrated earlier theories. The main premise of the model was based on an individual's value system influencing their expectations about various aspects of the job (Hom & Griffeth, 1995). In addition to values, personal characteristics such as age, tenure, and family responsibilities also influence the expectations of employees. The founders of the model proposed that turnover follows a sequence of three main variables. The three main variables identified in the model are, "job expectations, conceptualized as met expectations, and values influence an individual's affective response to a job; affective responses affect desire and intention to stay or leave; and an intention to leave an organization leads to actual leaving," (Lee & Mowday, 1987, p. 722). The main affective responses to job and organization include job satisfaction, job involvement, and organizational commitment (Lee & Mowday, 1987). It was also concluded that the more closely pre-job expectations met up with actual work experience, the greater the satisfaction and desire to stay in the organization (Hom & Griffeth, 1995). Similar to March and Simon (1958), Steers and Mowday (1981) felt intentions to quit were influenced by available job alternatives. Refer to Appendix A, Figure A4 for an illustration of Steers and Mowday's (1981) model of turnover.

Insert Figure A4 about here

Bluedorn (1982) attempted to develop a more complete understanding of the turnover process by synthesizing three existing turnover models. The turnover models synthesized were established by Price (1977), the organizational commitment model, and the model developed by Mobley (1977). The integrated model introduced variables which had been suggested in the previous models or in the empirical testing performed on the models. Bluedorn (1982) postulated that as job satisfaction decreased, organizational commitment decreased. Decreased organizational commitment would then increase the amount of job search in which an individual might participate. The increase in job search also meant an increase in intent to leave, which led to actual turnover. The job satisfaction variable was part of the original Price (1977) model. The work of Marsh and Mannari (1977) is credited with the position of organizational commitment, and Mobley's (1977) model suggested the position of job search and intent to leave (Bluedorn, 1982). The model was formulated in the integrative mode, and it includes individual, organizational, and environmental variables. Appendix A, Figure A5 contains an illustration of Bluedorn's (1982) unified model of turnover.

Insert Figure A5 about here

Over time, the study of turnover has received considerable attention from researchers (Hom & Griffeth, 1995). The research has focused on the voluntary aspect of termination because researchers desire to know what motivates employees to withdraw from a workplace. Regardless of all the researches done on turnover, researchers have not been able to isolate one

construct solely responsible for turnover. In order to fully understand the concept of turnover, it is important to continue to study other possible reasons for voluntary termination.

Turnover in the military setting has been evaluated in much the same way as the civilian sector. Military turnover studies have primarily focused on the systematic evaluations which are determined by the individual's perceptions about the job (Holt et al., 2007). Although the research has been centered on the same areas, the military is faced with some unique differences. For example, military members do not have as much autonomy in career decisions as their civilian counterparts. Civilians are able to leave their profession generally at any time, while a military member is required to fulfill their commitment before they are allowed to terminate their service in the military (Holt et al., 2007).

Operations Tempo

Recent developments in the world have caused the U.S. military to be deployed in a magnitude and duration never seen before. Not only has the military been involved in typical military operations, but it has also been involved in an increasing amount of peacekeeping and small-scale contingencies such as in Haiti in 1994 and Somalia in 1993 (Hosek, Kavanaugh, & Miller, 2006). With the increase in military operations the amount of time away from primary duty stations has dramatically increased. Military members are often away from their homes to attend military schools, train for war, conduct humanitarian aid, carry out peacekeeping missions, and take part in combat operations (Castro & Adler, 2005). Some members of the armed forces are experiencing their second and third tour in Iraq, and it is not uncommon for troops to be home for six months before they are deployed again (Hosek, Kavanaugh, & Miller, 2006). Currently members of the armed forces can be deployed from four to twelve months depending on the branch of service they serve in. In addition to deployments, military members

often work in excess of 50 to 55 hours a week (Castro & Adler, 2005). For example, in a report provided to the President and Congress, the Army reported that of the approximately 640,000 soldiers serving on active duty, 315,000 are deployed or forward stationed in more than 120 countries to support operations in Iraq, Afghanistan and other theaters (Rumsfeld, 2005). More recent information reported in the Quadrennial Defense Review Report stated that on any given day nearly 350,000 members of the Armed Forces are deployed in approximately 130 countries (Quadrennial Defense Review Report, 2006). With the increase in deployments and work hours, it is important to determine if the strain placed on the troops is increasing turnover.

OPTEMPO is a relatively new construct that has not been evaluated extensively in regards to its influence on turnover. One of the reasons OPTEMPO has received attention recently is due to the common use of OPTEMO as an explanation for why military members are leaving the military (Huffman, Adler, Dolan, & Castro, 2005). OPTEMPO has been defined in many different ways, but for the purpose of this study, the research will be based on the OPTEMPO definition provided by Huffman, Adler, Dolan, and Castro (2005). The authors of the study felt OPTEMPO was a multifaceted construct that needed to reflect a military member's duties in garrison, training, and deployed environments (Castro & Adler, 2005). Huffman, et al. (2005) defined OPTEMPO as the rate of military operations as measured by deployments, training exercises, Temporary Duty (TDY) assignments, and work hours. To understand the effects of OPTEMPO on the armed forces, recent studies will be evaluated in this literature review.

Great concern has been expressed by numerous observers about the increased pace of overseas operations encountered by the U.S. Armed Forces (Sortor & Polich, 2001). Increased operations can have an effect on near-term readiness and morale, but also longer-term force

capability and the military's continued ability to recruit and retain high quality personnel (Sortor & Polich, 2001). A large percentage of personnel who have deployed to Iraq and Afghanistan, have faced hostile fire and have seen colleagues injured or killed; many military planners feel that these circumstances have had an effect on the military member's intentions to stay in the military (Hosek, Kavanagh, & Miller, 2006). In addition to the increased deployments, the military members that remain on station have been required to work longer hours, attend more training exercises, and go on more TDYs.

To better understand these effects, the RAND Arroyo Center conducted several empirical analyses to better understand OPTEMPO issues and concerns. The goal of their research was to create an empirically grounded description of tempo and its possible effects on military members (Sortor & Polich, 2001). Sortor & Polich (2001) felt that deployments were but one source of the demand on units and their soldiers. To gain a full appreciation of OPTEMPO, it is essential to evaluate regular unit training cycles, joint or combined readiness exercises, support for other national goals, and local installation support activities. Similar to the studies mentioned before, Sortor & Polich (2001) felt that OPTEMPO has taken on different meanings over the course of only a few years. Regardless of the disagreement about the definition of OPTEMPO, Sortor & Polich (2001) stated that OPTEMPO is too high and the pace of activities limits the armed forces and their capability to maintain readiness for immediate deployment to a distant combat theater.

In 1997 the Army began collecting data describing the amount of tempo their units were experiencing. Units were required to submit a monthly report that listed the number of days of overnight training on post or local training off post, overnight training off post or at a Combat Training Center, overnight training in support of joint training exercise, and all deployments (Sortor & Polich, 2001). Sortor and Polich evaluated the monthly Army deployment tempo

(DEPTEMPO) reports from December 1997 through October 2000 (N = 1,400 units) to see what kind of effect the DEPTEMPO had on the units and their members. Sortor and Polich's (2001) research indicated that Army deployments have increased dramatically. The average time deployed rose 30% between 1997 and 2000 (Sortor & Polich, 2001). Even though the deployments increased in the time period, the ultimate effects on morale and turnover were inconclusive and ambiguous. Sortor and Polich's (2001) data indicated that deployments could exert negative and positive effects on retention depending on the circumstances and number of deployments experienced by the individual. The results also demonstrated that a static measure of tempo and deployments does not entirely explain the effects of OPTEMPO. To be able to understand the effects of tempo other factors such as less than 100% unit manning at home station need to be factored into the OPTEMPO study. When these units face shortages of personnel at the home station, the effects of OPTEMPO increases (Sortor & Polich, 2001).

The Rand National Defense Research Institute also conducted research on the effect of deployments on reenlistment in 2002 with a study administered by Hosek and Totten (2002). The study focused on active-duty enlisted members who were eligible for reenlistment. To measure OPTEMPO Hosek and Totten (2002) counted the number of hostile and nonhostile deployments the enlisted member took part in during a three-year window prior to their reenlistment decision. The goal of the study was to see the effect the number of deployments and length of the deployment had on the enlisted member's reenlistment decision. The data for the study contained longitudinal data for all enlisted active-duty personnel facing a reenlistment decision by month from January 1993 through September 1999 (Hosek & Totten, 2002). It was suggested that a relationship exists between deployments and reenlistment because military members learn about their preferences for deployments through the act of deploying and

experiencing increased OPTEMPO (Hosek & Totten, 2002). Once a military member experiences a deployment, they then develop expectations about deployments and the frequency of the deployments. The researchers found that reenlistment was higher among members who deployed as opposed to members who did not deploy as frequently (Hosek & Totten, 2002). The research also indicated the results did not change when the deployment was in a hostile or non-hostile environment (Hosek & Totten, 2002).

Hosek and Totten (2002) provided support for the argument that states as OPTEMPO increases, the desire to remain in the military increases. Reasons for these results may come from the measures used to determine OPTEMPO. Work hours, training exercises, and TDYs were not used to define the OPTEMPO of the military personnel. The only item used to measure the OPTEMPO of the military members was the amount of days spent in a deployed environment. This study provided more evidence for the need to have a common and an all encompassing definition of OPTEMPO.

Hosek and Totten (1998) also conducted a study that looked at the effect of OPTEMPO on turnover for multiple services. The study was completed by the Rand Corporation and focused on the effect of long separation and hostile duty on the reenlistment of enlisted personnel (Hosek & Totten, 1998). The study measured Personnel Tempo (PERSTEMPO) by evaluating Defense Manpower Data Center (DMDC) military pay records. The records were evaluated for personnel that received Family Separation Allowance, paid to personnel with dependents when the personnel are separated from their dependents for 30 consecutive days or longer, and to personnel receiving Hostile Fire Pay, paid to personnel subject to hostile fire or explosion or on duty in areas deemed hostile (Hosek & Totten, 1998). The information was collected for a 24-month period and then compared to the reenlistment intentions of the personnel. The results of

the study showed that long or hostile duty both increases and decreases reenlistment. For individuals with no hostile duty they are likely to reenlist to gain this experience, while those who do have excessive experience with long or hostile duty deployments tend to experience a reduction in reenlistment (Hosek & Totten, 1998). Overall, the study indicated a link between reenlistment and deployments (Huffman et al., 2005). Hosek and Totten (1998) noted limitations to the study such as in some instances long and hostile duty actually increased reenlistment, but over a long period of time too many of these types of deployments could be detrimental to reenlistment figures (Hosek & Totten, 1998). The study had additional limitations because it only evaluated enlisted members and measured OPTEMPO with the single measure of pay entitlements. Although the study had limitations it was one of the first to highlight the curvilinear relationship between deployments and turnover intentions. Soldiers without deployment experience were leaving the force because of a lack of OPTEMPO and soldiers with numerous deployments were also leaving the force because of high OPTEMPO.

The Rand Corporation continued their research on the effect of deployments on service members in 2006 with a study conducted by Hosek, Kavanagh, and Miller (2006). The purpose of the research was to gain insight into the effect of the current deployment pace on active duty personnel (Hosek, Kavanagh, & Miller, 2006). The researchers attempted to determine a definitive answer about the effect deployments had on a service member's willingness to stay in the military. The researchers used focus groups and the March 2003 and the July 2003 Status of Forces Survey of Active Duty Personnel to determine the effect of deployments on military members. The results were inconclusive and demonstrated that deployments have different and conflicting effects on the service member (Hosek, Kavanagh, & Miller, 2006). The study was unique because the data suggested deployments can affect the same individual in multiple ways

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(Hosek, Kavanagh, & Miller, 2006). In this study, OPTEMPO was defined as the number of times a military member deployed, and instead of including work hours in the OPTEMPO definition it was looked at separately. Looking at the two variables separately does not give the study a true reflection of all the effects of OPTEMPO. In order to provide a true reflection of OPTEMPO Hosek, Kavanagh, and Miller (2006) should have combined the number of days spent deployed, the number of days on training exercises, and the number of days where the member worked longer than a normal duty day.

The U.S. Army has also displayed great interest in the effect and perception of OPTEMPO on their service members' job and career attitudes. To gain greater insight on the subject, the Army issued a survey to all exiting members called the Army Career Transition Survey (ACTS). Specifically the instrument measured the service members' satisfaction with various aspects of Army life and how it affected their decision to leave the military (Huffman et al., 2005). The results of the ACTS were studied by Giacalone (2000) to develop standardized administration techniques and revise the instrument to increase reliability. This study helped broaden the information available on OPTEMPO, but it was not measured directly in the study, and inferences were made based on items that asked about family separation (Huffman et al., 2005). The reason with the highest rating (30.2%) for separation from the military was, "amount of time separated from family" (Giacalone, 2000). Another item ranked high (22.4%) as a reason for leaving the service was "amount of time for family and friends" (Giacalone, 2000). It can be implied from these numbers that the perception of high OPTEMPO was associated with a service member's intentions to leave the military (Huffman et al., 2005). The use of these indirect measures of OPTEMPO cannot be considered conclusive evidence in favor of the idea

that high OPTEMPO is a cause of turnover. In order to make those claims, more OPTEMPO variables need to be addressed and measured directly.

Another study that illustrates the possible relationship between OPTEMPO and turnover is a study performed by Huffman, Adler, Dolan, Thomas, and Castro (2001). The authors evaluated workload and retention findings based on data from the U.S. Army, Europe & Seventh Army and U.S. Army Medical Research Unit-Europe OPTEMPO/PERSTEMPO study (Huffman et al., 2001). The data was collected from May 1999 to December 2000 from active duty Army personnel stationed in Germany. The instruments used in the study included a survey that measured work hours, work hours on days off, days worked per week, days on temporary duty assignment, deployment history, days on training exercises, and a question about career decision intentions (Huffman et al., 2001). The second instrument used in the study was an interview that asked personnel what issues influenced their intentions to leave or remain in the military. One question dealt explicitly with OPTEMPO by asking, "How much is the pace of operations or workload a factory in your decision?" (Huffman et al., 2001). The study discovered that rank and unit type (i.e. combat, or non-combat) were predictive of career intentions (Huffman et al., 2001).

In addition to the findings on rank and unit type, the researchers reported OPTEMPO was a reason to leave the Army, and of all the OPTEMPO related factors, "work hours" was the most common reason to leave the Army (Huffman et al., 2001). Although this study demonstrated OPTEMPO was a factor in career intentions, it was not the highest reported reason for leaving. For personnel intending to leave the military, the largest majority (84.5%) reported "pursue other interests" as the reason for leaving the Army (Huffman et al., 2001). Due to these results, it is

difficult to determine whether or not OPTEMPO is the main reason members of the military are leaving the armed forces.

With the findings of Huffman et al. (2001) reporting unit type was predictive of turnover intentions, further research in that area of study must be reviewed. Reed and Segal (2000) also studied OPTEMPO and focused on the impact of increased OPTEMPO on a soldiers' attitude toward an increase in nontraditional or peacekeeping operations (Reed & Segal, 2000). The research focused on data gathered from the 10th Mountain Division at Fort Drum, NY. The survey was administered approximately two months after personnel returned from a peacekeeping operation in Haiti (Reed & Segal, 2000). The 552 soldiers that participated in the study completed a survey and dozens of soldiers participated in group interviews. The survey focused on attitudes towards nontraditional or peacekeeping operations, with one item measuring career intentions. The results of the study did not demonstrate a significant relationship between intentions to reenlist and the number of deployments. Even when the researchers controlled for rank and branch the correlations between number of deployments and career intentions were not affected (Reed & Segal, 2000). The findings of this study used the number of deployments experienced by the personnel as the measure of OPTEMPO (Huffman, Adler, Dolan, & Castro, 2005). The inconsistent measure of OPTEMPO may have led to the results that conflict with other studies on OPTEMPO.

In his study of job satisfaction and retention of 1,669 U.S. Navy and U.S. Marine Corps aviators, Sullivan (1998) suggested high OPTEMPO increases turnover. The survey had two separate measures related to OPTEMPO which asked the aviators about the amount of time they spent away from home (Sullivan, 1998). The amount of time spent away from home for the aviator was used as the measure of OPTEMPO. In addition to the measures of OPTEMPO, the

survey also addressed the amount of hours worked both at home station and in garrison. Over

80% of the aviators surveyed were dissatisfied with their work hours, which led to the

assumption that work hours would have an adverse affect on turnover intentions (Sullivan,

1998). Generally officers who spent more time at work were more dissatisfied and were more

likely to report intentions to quit than pilots who did not report long work hours (Huffman et al.,

2005). In addition to the increase in work hours being a reason for intentions to quit, the pilots

also reported that time away from family was a significant reason for intending to leave military

service (Sullivan, 1998). Overall, the OPTEMPO measures recorded in the study were linked

with an increase in turnover (Huffman et al, 2005). One concern with the study is the

information reported that there were multiple reasons for leaving the organization. OPTEMPO

can be linked with intentions to leave, but other reasons to leave that were recorded included

"lack of resources" and "inadequate flight time" (Sullivan, 1998).

With all of the conflicting information about the effect of OPTEMPO on turnover,

Huffman et al. (2005) attempted to establish a consistent definition of OPTEMPO and determine

its effect on turnover. The study used the combined measures of deployments, training

exercises, TDY assignments, and work hours as the definition of OPTEMPO (Huffman et al,

2005). They felt a method of understanding OPTEMPO's effect on turnover was to use a

consistent definition throughout all additional studies. The common definition would help future

researchers address possible explanations for the inconsistent data being reported in the area of

OPTEMPO. The data used by the research team was collected from the U.S. Army Europe from

May 1999 to January 2001 (Huffman et al, 2005). Three instruments were used to assess

OPTEMPO and career intentions; an OPTEMPO survey (N = 288), a career decision survey (N

= 288), and an OPTEMPO interview (N= 177) (Huffman et al, 2005). The study provided

evidence that role overload related to work hours was tightly linked with turnover, and that the relation between OPTEMPO and turnover is curvilinear (Huffman, Adler, Dolan, & Castro, 2005). Basically, a soldier who does not have high OPTEMPO is likely to turnover, while a soldier with too much OPTEMPO is also likely to leave the organization. Analysis of the study would suggest that it is important to find the ideal amount of OPTEMPO in order to avoid unwanted employee turnover.

The civilian work force is also affected by OPTEMPO, although the variable is often looked at mainly as the amount of hours worked. In the decades leading up to the new millennium, the amount of hours worked by professionals has continued to increase from year to year (Peiperl & Jones, 2001). Despite the increase in technology and better business practices, the amount of hours worked has not decreased. If the trend continues, excessive working may become a common characteristic of jobs in the new millennium (Peiperl & Jones, 2001). In the medical, investment banking, consulting, and law fields it has become the norm to work well beyond what people outside of those fields would consider normal (Peiperl & Jones, 2001). In addition to industry differences, there are also cultural differences in the perception of overworking. For example, the average American worker puts in about 1,960 hours per year while the average French or German worker works about 1,500 hours, and Japanese workers average 2,150 hours per year (Peiperl & Jones, 2001).

Research in the field of overworking started in the early 1970s when research on workaholics was introduced by Oates (1970). There was a boom of interest in the field in the 1980s, but only in the popular press and clinical literature, and most of the academic interest in the field did not start until the early 90s (Peiperl & Jones, 2001). Research in the field has focused on the effects of overworking on the worker. Some of the effects linked to overwork are

possible burnout, decline in individual performance, increases in health and accident related expenses, and higher turnover rates (Porter, 1996). One of the discoveries in the field has focused on equity theory and overworking (Peiperl & Jones, 2001). If an employee feels their extra work is benefiting themselves and the company, they feel like their extra work is valuable. In contrast, an employee that feels their extra time at the office is not benefiting everyone, it can lead to low job satisfaction which can lead to other consequences, including turnover.

Most studies analyzed the OPTEMPO and turnover relationship as a simple linear association (Huffman et al., 2005). Recent research has shown the relationship is more complex and should be evaluated as a curvilinear relationship. A curvilinear relationship would suggest there is an optimal level of OPTEMPO which maintains unit readiness and maximizes an individual's intention to remain in the military (Huffman et al., 2005). A curvilinear relationship also suggests turnover intentions will increase when OPTEMPO levels are either very low or very high.

> *H1: The relation between OPTEMPO and turnover intentions is curvilinear. At moderate levels, OPTEMPO measures will be associated with low turnover intentions. At both low and high levels of OPTEMPO, however, turnover intentions will be high.*

Organizational Commitment

Another aspect of employee and organizational linkages that has received considerable attention from managers and researchers is the topic of organizational commitment (Mowday, Porter, & Steers, 1982). There are several reasons why organizational commitment has been studied so extensively, but one of the main reasons is it has proven to be a fairly reliable predictor of behaviors such as turnover (Mowday, Porter, & Steers, 1982). Overall, research has shown that an employee's level of commitment has an effect on commitment related phenomena such as turnover (Becker, & Billings, 1993). When an employee is considered to be committed

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to the organization, he is more likely to remain with the organization. Organizational commitment is similar to OPTEMPO as there is little consensus among researchers on the definition of the term. From the vast array of definitions, it is clear that no real consensus exists with the definition of organizational commitment (Harrison, Newman, & Roth, 2006).

Mowday, Porter, and Steers (1982) felt that organizational commitment should be viewed as the relative strength of an individual's identification and involvement with a particular organization. The researchers also felt organizational commitment could be broken down into three separate areas, to include: "(a) a strong belief in and acceptance of organizational goals and values; (b) a willingness to exert considerable energy on behalf of the organization; and (c) a strong desire to maintain membership in the organization" (Mowday, Porter, & Steers, 1982, p. 43). Later researchers also divided organizational commitment into three categories. Meyer and Allen (1997) defined organizational commitment as a combination of the three processes of affective commitment, continuance commitment, and normative commitment. Affective commitment is someone who possesses emotional attachment or identification with the organization (Gade, 2003). Continuance commitment is an individual who feels the need to continue with the organization because it would be too hard to find another job or because they have too much invested in the organization to leave (Gade, 2003). Normative commitment is seen in an employee when they feel there is an obligation to stay with the organization, and they consider it more than just a job (Meyer & Allen, 1997). With the approach introduced by Meyer and Allen (1997), organizational commitment is viewed as a measure of various types of motives to remain with the organization.

Although organizational commitment has been an area of vital concern to the military, there have been very few organizational commitment studies conducted on military personnel

(Gade, Tiggle, & Schumm, 2003). The studies conducted in this area have been grounded in the idea that members' job satisfaction and commitment are central to their decision to leave the military (Holt et al., 2007). Due to the relationship between organizational commitment and employee retention the military has recently been interested in the connection between these two variables. Generally, strongly committed employees are less likely to leave the military than weakly committed personnel (Allen, 2003). Hom and Hulin (1981) supported this belief by successfully predicting that organizational commitment affected reenlistment intentions and reenlistment behavior. Several other researchers supported the same correlation between organizational commitment and turnover intentions (see, for example, Kim, Price, Mueller, & Watson, 1996; Martin & O'Laughlin, 1984; and Teplitzky, 1991). Similar to many constructs, organizational commitment is hard to define and is affected by numerous outside influences. For example, prior research has established a negative relationship between tenure and age and organizational commitment (Wright & Bonett, 2002). It has been noted in some cases for more experienced employees to withdraw commitment to the organization and go through the motions until retirement (Wright & Bonett, 2002). Due to the influence between the moderating variables of age and tenure, it is important to take into consideration moderating variables when evaluating organizational commitment.

Previous research has indicated organizational commitment has a negative relationship with turnover intentions. As an individual increases in organizational commitment, their intentions to leave the organization decrease. The field of OPTEMPO has not addressed the impact organizational commitment has on OPTEMPO, and evaluating the effect organizational commitment has on the OPTEMPO and turnover relationship will help further research in the field of OPTEMPO.

H2: Organizational commitment will moderate the curvilinear relationship between OPTEMPO and turnover intentions in such a way that increased organizational commitment will result in a decreased impact of OPTEMPO on turnover intentions.

Job Satisfaction

Due to the great importance of job satisfaction to individuals and their well-being, job satisfaction has been studied since the 1930s (Sanchez, Bray, Vincus, & Bann, 2004). A lack of job satisfaction can lead to many individual issues as well as organizational issues. On an organizational level, lower job satisfaction is linked with higher turnover rates in an organization (Sanchez et al 2004). There have been numerous theories and models proposed on the subject of job satisfaction, and the majority of studies can be categorized into two fields; content theories and process theories (Harpaz, 1983). Content theories focus on individual characteristics and experiences that control the behaviors of employees, and process theories focus on how behavior is initiated, directed, maintained, and terminated (Sanchez et al., 2004).

Due to the differences between the employment environments of civilians and the military, many studies have been conducted to compare levels of job satisfaction between the two (Alpass, Long, Chamberlain, & MacDonald, 1997). Generally, these studies have shown that job satisfaction in the military is lower than job satisfaction in the civilian sector (Sanchez et al, 2004). Studies conducted by Woodruff and Conway (1990), Blair and Phillips (1983), and Fredland and Little (1983) reported results indicating military members reported lower levels of job satisfaction than civilians. Woodruff and Conway (1990) studied the perceived quality of life in a group of 430 Navy sailors. The Navy quality of life ratings were compared with ratings obtained from a U.S. national sample. The Navy evaluations were higher than civilians in satisfaction with self and the ability to adjust to changes, but the Navy sailors rated lower on items measuring satisfaction with work and personal life (Woodruff & Conway, 1990). Blair

and Phillips (1983) compared the military and civilian work settings by using data from the National Longitudinal Survey (N = 11,412) and interviews with 1,281 persons of the same age group who were serving in the Armed Forces (Blair & Phillips, 1983). The study reported that less satisfactory quality of work life was experienced by members of the military (Blair & Phillips, 1983). Blair and Phillips concluded the difference in satisfaction between the military and civilian work force could be attributed to the work expectations of military members not being met (Blair & Phillips, 1983). Fredland and Little (1983) compared job satisfaction determinants among 18 to 22 year old male workers in the civilian workforce and members in the Armed Forces of the same ages. The study also used the National Longitudinal Survey, but they confined their sample to 736 military members and 1,644 civilians (Fredland & Little, 1983). The study confirmed much of the previous research which stated that job satisfaction is lower in members of the armed forces. Fredland and Little (1983) concluded that the difference in satisfaction could be reduced if the job environment and pay were similar between the military and civilian workforce (Fredland & Little, 1983).

It has been suggested that job satisfaction in the military may be unique due to the unique stressors and compensation associated with military work (Sanchez et al., 2004). Some of the unique aspects of the military that were suggested as reasons for this difference are separation from family, friends, and a familiar environment; dangerous and unpleasant conditions; long and irregular hours; low pay; and frequent rotation. Overall, the difference in job satisfaction and the military can be attributed to the influence of the work environment on the individual (Alpass, Long, Chamberlain, & MacDonald, 1997). Many of the suggested reasons for the lower levels of job satisfaction reported, are also measures of OPTEMPO. Due to the apparent similarities

between measures of job satisfaction and OPTEMPO, the moderating relationship between the two variables will be tested.

> *H3: Job satisfaction will moderate the curvilinear relationship between OPTEMPO and turnover intentions in such a way that increased job satisfaction will result in a decreased impact of OPTEMPO on turnover intentions.*

Job satisfaction is a variable that may be influenced by many factors. One of the factors generally attributed to differences in job satisfaction is demographic characteristics (Sanchez et al., 2004). In spite of the recognition of demographic variables as an influence on job satisfaction, studies may not have controlled for the effects of these variables (i.e., Brush, Moch, & Pooyan, 1987). Because of the limited studies, inconclusive results have been found on several demographic characteristics such as, sex, income, and education (Sanchez et al., 2004). Although there are inconclusive results, there is ample evidence to suggest there is a positive relationship between age and job satisfaction (Alpass et al., 1997).

Although evidence has shown a relationship exists between age and job satisfaction, there is still debate whether the relationship is curvilinear or linear. Initial work by Herzberg (1957) found that job satisfaction had a curvilinear relationship with age, meaning job satisfaction was found to be high when individuals first started their job, but declined until people reached their late twenties or early thirties (Sarker, Crossman, & Chinmeteepituck, 2003). Later research has provided evidence of a strong positive linear relationship between age and job satisfaction (Savery, 1996).

Another variable identified as a strong predictor of job satisfaction is tenure (Alpass et al., 1997). Although tenure and age are highly related they are conceptually different and affect job satisfaction in distinctive ways (Gibson & Klein, 1970). Early research conducted by Herzberg (1957) provided evidence in favor of a curvilinear relationship between tenure and job

satisfaction, much like job satisfaction and age. Later research on tenure and job satisfaction

followed the same trend as age and job satisfaction and researchers began to find a positive linear

relationship between the two constructs (Sarker et al., 2003). Even later research provided

evidence for a significant negative relationship existing between tenure and overall satisfaction

(Sarker et al., 2003). The underlying assumption regarding tenure and job satisfaction is that

dissatisfied workers resign while satisfied workers remain with the organization (Sarker et al.,

2003).

Individual Characteristics

The study of OPTEMPO and turnover must take into account key demographic variables

in order to gain a true understanding of the subject (Huffman et al., 2005). In both the civilian

and military sector, the use of individual characteristics has been studied extensively and has

been discovered to relate to the trigger of turnover (Holt et al., 2007). In contrast, studies on

OPTEMPO and turnover conducted on military members have not controlled for rank and unit

type (Huffman, Adler, Dolan, & Castro, 2005). Because junior members of the military are more

likely to report intentions to leave the military than their senior leaders, it is important to evaluate

the effect of rank on OPTEMPO and turnover (Huffman, Adler, Dolan, & Castro, 2005). Also,

the study of the effect of gender on OPTEMPO and turnover is important due to the conflicting

results currently reported in the field.

Gender

Extensive research on the effect of gender and turnover has had inconclusive results.

Hom and Griffeth (1995) conducted a meta-analysis of 15 studies that observed females were no

more likely to leave any organization than males. Earlier research conducted by Cotton and

Tuttle (1986) concluded there is strong confidence in their meta-analysis that women are more

likely to leave an organization than men. Cotton and Tuttle (1986) did note that their research revealed fewer studies found gender differences than found no differences at all, and one study reported that males were more likely to leave than females.

In more recent research Stroh, Brett, and Reilly (1996) studied 488 male and 127 female managers who had been transferred by 20 *Fortune* 500 companies. The study found during a two-year period, women were more likely to leave an organization than men (Stroh, Brett, & Reilly, 1996). In contrast, a study of U.S. federal civil service found there were no gender differences in turnover (Lewis, 1992). An even more recent study by Lyness and Judiesch (2001) found that men were more likely to turnover than females. The recent studies show that there are still inconclusive results in the field of gender and turnover. Some researchers feel it is important to understand the relationship between gender and turnover in order to combat the statistical discrimination theory. The statistical discrimination theory states that employers' perceptions about groups, such as the perception that women resign more than men, can lead to discrimination against members of the group (Lyness & Judiesch, 2001).

The current research on OPTEMPO and turnover has not studied in depth the demographic of gender. Some studies have focused on the effect of unit type on personnel turnover because unit types generally characterize the demographic composition of a particular unit (Huffman et al., 2005). For example, many combat arms units are all male (Huffman et al., 2005). Kelly, Hock, Bonney, Jarvis, Smith, and Gaffney (2001) also addressed the issue of gender and turnover by evaluating whether deployment experiences of active-duty mothers caused them to leave the organization. The differences reported can affect the overall job satisfaction and intent to leave the armed forces. In order to fully understand the relationship gender has with OPTEMPO and turnover, it is important to study it more in depth.

H4: The relationship between OPTEMPO and turnover intentions is moderated by gender. Specifically, the curvilinear relationship between OPTEMPO and turnover intentions will decrease for males and increase for females.

Rank

Evaluation of the different ranks is vital to the furthering of the OPTEMPO research due to studies indicating senior leaders have different feelings about work hours and other factors of OPTEMPO. Junior personnel reported they were surprised at the frequency of deployments and felt if the current intensity continued or increased it would affect their feelings toward career intentions (Hosek, Kavanagh, & Miller, 2006). In addition to being the group most surprised by the frequency of deployment, the junior enlisted personnel were also most likely to report their intent to leave the military (Huffman et al., 2001). As military members increase in rank, they inevitably increase in age, and age has also been found to have a negative relationship with voluntary turnover (Cotton, & Tuttle, 1986). Because of this, younger employees are believed to be more likely to leave the organization than older members.

In addition to younger employees being more likely to leave an organization than older members, employees who have longer tenure also generally have lower turnover rates (Youngblood, Mobley, & Meglino, 1983). Some of the explanation for the higher tenure employees having a smaller amount of turnover is attributed to a change in perceptions about the organization. As employees gain experience in their jobs, their values and circumstances change, and as these values and circumstances change, the employees attitudes, intentions, and behaviors toward the organization are also expected to change (Youngblood, Mobley, & Meglino, 1983).

H5: The relationship between OPTEMPO and turnover intentions is moderated by rank. Specifically, the curvilinear relationship between OPTEMPO and turnover intentions will decrease as individuals are lower in rank.

CHAPTER 3

METHOD

With the lack of consistent findings of OPTEMPO and turnover studies, this study will attempt to replicate the findings of Huffman et al. (2005) and further the research field of OPTEMPO and turnover. The study used the definition of OPTEMPO developed by Huffman et al. (2005) which focuses on the measurement of deployments, training exercises, TDY assignments, and work hours. The study also followed the advice of Huffman et al. (2005) and used a sample that is more representative of U.S. military personnel. In addition to using a more representative population of military personnel, the data is more current and should better reflect attitudes of military personnel in the post-September 11, 2001 military, which has seen a dramatic increase in OPTEMPO.

The data used for this study is secondary data obtained from the Defense Manpower Data Center (DMDC) August 2004 Status of Forces Survey, which is attached as Appendix H. The Human Resources Strategic Assessment Program, located in the DMDC, conducts surveys to support the personnel information needs of the Under Secretary of Defense for Personnel and Readiness (Defense Manpower Data Center, 2004). The August 2004 Status of Forces Surveys conducted by the DMDC provided data on the attitudes and opinions of the Department of Defense on a wide range of personnel issues (Defense Manpower Data Center, 2004). The survey focused on the personnel issues of overall satisfaction, retention intention, perceived readiness, stress, tempo, permanent change of station moves, the Global War on Terrorism, details on retention, deployments, assignments, organizational commitment, satisfaction with aspects of military life, member's health, compensation, and tuition assistance programs (Defense Manpower Data Center, 2004).

Procedures

Data for the August 2004 Status of Forces Survey were collected via an on-line 144-item

questionnaire completed by randomly selected military members chosen from the DMDC

Active-duty Master Edit File. The survey process began on July 12, 2004, when the DMDC

mailed out notification letters to 38,112 military members selected to participate. The

notification letter explained the purpose of the survey, how the survey information would be

used, and why the participation of the member was important (Defense Manpower Data Center,

2004). Throughout the time the survey was available on-line the sample members were sent

additional reminders about the survey through the mail and e-mail (Defense Manpower Data

Center, 2004). Data was collected from the survey's website from July 26, 2004, to September

2, 2004.

Participants

The target population for the Status of Forces Survey consisted of all active-duty

members of the Army, Navy, Marine Corps, and Air Force (Defense Manpower Data Center,

2004). The participants must have had at least six months of military service and been below

flag rank (Defense Manpower Data Center, 2004). Results of the survey were reported both for

the entire population and a number of reporting categories. The reporting categories used were

Service, paygrade, location, education level, race/ethnicity, family status, gender, officer/enlisted

by gender, and Service by paygrade (Defense Manpower Data Center, 2004).

In order to obtain a random sample of the population, the DMDC used a single-stage,

non-proportional stratified random sampling procedures (Defense Manpower Data Center,

2004).   All members of the population were categorized into homogenous groups based on

available demographic variables. For example, the survey administrator grouped the military

members by gender and rank (e.g., all female members of the Navy were grouped together). The

members were then chosen at random within each of the groups (Defense Manpower Data

Center, 2004). Smaller groups were over-sampled to ensure there would be enough responses

from the group to perform proper statistical analysis. These procedures were also used to ensure

the data produced adequate sample sizes for the categories required for the survey. The initial

survey invitation was sent to 38,112 individuals drawn from the DMDC's Active-Duty Master

Edit File (Defense Manpower Data Center, 2004). Members of the sample were eliminated from

consideration if they were not on active-duty as of the first day the web survey was available

(Defense Manpower Data Center, 2004). Only 66% of the sample fit into this category and were

eliminated from consideration (Defense Manpower Data Center, 2004). Of the 38,112 sample

members, 13,396 completed surveys were returned to the DMDC. The sample for this study

used consisted of the 2,171 Air Force members that responded to the survey.

Every survey is subject to potential sources of bias (Alreck & Settle, 2004). Due to the

methods used to administer the DMDC Status of Forces Survey, there was potential for non-

response bias and self-selection bias to occur. For reasons either dependent upon the survey or

independent of the survey, some military members decided not to respond to the survey. In most

cases, it is almost entirely impossible to avoid non-response bias completely, and researchers

must accept a certain degree of bias to be tolerated (Alreck & Settle, 2004). The Status of Forces

Survey accounted for the non-response bias present in the data by sending the survey to a large

number of individuals, and weighting the data with a non-response adjustment factor to minimize

the bias that arose from different response rates among the demographic subgroups (Defense Manpower Data Center, 2004).

In addition to non-response bias, the Status of Forces Survey also accounted for the possibility of self-selection bias. The survey was administered using an online survey and frequent reminders about the survey were mailed to the selected sample, and because of the way the survey was administered, the respondents could easily ignore the invitation to respond. Alreck and Settle (2004) suggest a way to overcome the effects of self-selection bias is to reduce the respondent feelings that they can easily decline to participate in the survey. The DMDC Survey (2004) provided information to the respondents stating the voluntary nature of the data collection and that no penalty would be incurred if the survey was not completed, but it also effectively stated the purpose of the survey and benefits to the respondent. Despite the measures taken to encourage participation there was still a possibility of self-selection bias evident in the data collected in the survey.

Measures

The secondary data set from the DMDC, August 2004 Status of Forces Survey, was used to measure four variables and the individual characteristics of the survey respondents. The four variables used were OPTEMPO, career intentions, job satisfaction, and organizational commitment. The individual characteristics used from the secondary data were rank, and gender.

OPTEMPO

OPTEMPO is a term defined in many ways, but for the purpose of this study it was evaluated based on the definition of Huffman, Adler, Dolan, and Castro (2005). OPTEMPO is the rate of military operations and was measured by deployments, training exercises, Temporary Duty (TDY) assignments, and work hours (Huffman, Adler, Dolan, & Castro, 2005). The

relevance of OPTEMPO as a cause of turnover first emerged in the early 1990s when there was a decrease in military personnel and a dramatic increase in military operations (Huffman, Adler, Dolan, & Castro, 2005). Members who took the survey reported on number of deployments, number of nights away from permanent duty station because of military duties in the past twelve months, and the number of days worked longer than a normal duty day in the past twelve months. The number of nights an individual was away from their permanent duty station because of military duties in the past twelve months was measured in survey item number 29 (n = 2,150, M = 2.34, and SD = 1.12). The number of nights an individual was away from their permanent duty station because of military duties in the past twelve months provided information on the number of days the member has been deployed, taken part in training exercises, and been given TDY assignments. The final measure of OPTEMPO, work hours was measured by survey item 28 (n = 2,141, M = 4.28, and SD = 1.64). The number of days an individual worked longer than a normal duty day in the past twelve months added to the number of nights away from the member's permanent duty station because of military duties in the past twelve months to determine the OPTEMPO of the military member. The use of the member's reported information on their estimated work load can be a trusted reporting measure because studies have shown that perceived work load correlates reliably enough with archival records (Jacobs, 1998). The reported Coefficient Alpha for the composite OPTEMPO scale for this sample was .48 (n = 2,141).

Career Intentions

A military member's decision to remain in the military will be the result of the perceived balance between personal cost of workload and the personal benefit of their OPTEMPO (Huffman, Adler, Dolan, & Castro, 2005). Once a military member has decided that the levels of

OPTEMPO experienced are no longer worth remaining in the military, they may begin to have feelings that cause them to lean toward leaving the organization. The data provided on career intentions is considered reliable because a positive relation exists between stated career intentions and actual behavior (i.e., 95.7% of the soldiers in the study who stated that they intended to stay did indeed stay, whereas only 59% of the soldiers who stated they intended to leave military service actually did leave) (Huffman et al., 2005). Due to the work of Mobley (1982) intent to stay with the organization has been the closest explanation for turnover in the causal chain (Price & Sang-Wook Kim, 1993). When scholars choose to study turnover they tend to focus on the intent to stay because its relationship with turnover is moderately strong with a Pearson r = .50 (Steel & Ovalle, 1984). The career intentions of the survey respondents were measured in item 23 (n = 2,167, M = 3.70, and SD = 1.30). Item 23 asked the respondents to comment on whether or not they would stay on active duty if they were required to make a decision on it. The participants were required to answer the question on a scale with "very likely" as the highest possible answer, and "very unlikely" as the lowest possible answer.

For the purposes of this research a single-item measure was used to determine the career intentions of military members. The use of single-item measures are often discouraged in scholarly research, but recently work on single-item measures have challenged the skeptics (Wanous & Hudy, 2001). Some researchers even feel that more items in self-report measures of psychological constructs the better (Gardner, Cummings, Dunham, & Pierce, 1998). Although there have been many critics of the use of single-item measures, the use of them has a long history in the field of turnover (Wanous & Hudy, 2001). Gardner, Cummings, Dunham, and Pierce (1998) attacked the criticisms of single-item measures with the argument that one "good" item can be better than many "bad" items (Gardner et al., 1998). A recent study by Wanous and

Hudy (2001) concluded single-item measures have an estimated reliability of .82 for group level data and a reliability of .7 for individual level data (Wanous & Hudy, 2001). Generalizing from these results it is possible to hypothesize that single item measures might be better than multiple measures in some cases (Gardner et al., 1998). Studies have also shown that single-item measures provide a way for researchers to address methods variance concerns (Gardner et al., 1998).

Job Satisfaction

Military personnel who report a higher level of job satisfaction are more likely to stay or indicate an intention to stay in the military (Sanchez, Bray, Vincus, & Bann, 2004). By understanding the effect of job satisfaction on turnover, it may be possible to take steps to ensure the military retains valuable service members (Sanchez, Bray, Vincus, & Bann, 2004).   Job satisfaction was measured in the survey using a one-item measure in question 21 (n = 2,171, M = 3.76, and SD = .93). The respondent was asked to determine how satisfied they were with the military way of life. They answered based on a 5-point scale with "very satisfied" being the highest rating and "very dissatisfied" as the lowest ranking.

Organizational Commitment

The military is striving to develop more committed service members and families so they are more likely to stay in the military (Gade, 2003). As the service members commitment grows, they are less likely to be absent from their jobs and leave the military (Mowday, Porter, and Steers, 1982). The participant's organizational commitment to the military was measured in multiple ways. Each member was asked to state how much they agreed with a list of statements on organizational commitment using a 5- point scale anchored by "strongly agree" (5) and the lowest score corresponding to an answer of "strongly disagree" (1). An example of the

statements the individual was asked to remark on is, "I would not leave the military right now because I have a sense of obligation to the people in it" (Defense Manpower Data Center, 2004). The example stated previously is a question that was developed to measure normative commitment in individuals. All of the statements corresponding to organizational commitment can be found in item 81 of the survey. Descriptive statistics for item 81 of the survey are shown in Appendix B, Table B1. The Coefficient Alpha for the organizational commitment scale for this sample was .89.

Insert Table B1 about here

Rank

Rank is also a key demographic used in the study of OPTEMPO and turnover. Studies have shown that junior-enlisted members are more likely to report they are intending to leave the service than senior noncommissioned officers and officers, and may play a role in determining the relationship between OPTEMPO and turnover (Huffman, Adler, Dolan, & Castro, 2005). Another study conducted by Price and Sang-Wook Kim (1993) supported these results, but with new information. Price and Sang-Wook Kim (1993) found that the strongest intent to stay in the military was found in noncommissioned officers and officers below the rank of colonel. In addition, they also found that the intent to stay is strongest for those who have served for eleven years in the Air Force, and decreases continually for those who have served for either shorter or longer than this period.

The respondent was asked to identify their rank in survey item number 3. The Status of Forces Survey then separated the enlisted and officer respondents by breaking them down into five separate subgroups. The enlisted subgroup included all enlisted ranks from E1 to E9. The

subgroup was then broken down further into the following groups; E1 - E4 and E5 – E9 (Defense Manpower Data Center, 2004). The officer subgroup was divided into three groups, warrant officers (W1-W5) and commissioned officers (O1- O3 and O4 – O6) (Defense Manpower Data Center, 2004). The archival data set originally coded the rank data as follows: "1" E1 – E4 (n = 550), "2" E5 – E9 (n = 907), "3" W1 – W5 (n = 0), "4" O1- O3 (n = 411), and "5" O4 – O6 (n = 341). In order to ensure the data evaluation that occurred was done objectively the categorical information on rank was recoded into dummy variables. The use of dummy variables eliminated the possibility of error and increased the opportunity for the evaluation to provide information on how each variable truly affected the proposed turnover model.

Gender

The current research lacks information on the effect of the demographic of gender on OPTEMPO and turnover. In the study conducted by Price and Sang-Wook Kim (1993) they found that the role of being male has a negative effect on intent to stay. In general, men intend to stay in the Air Force less often than women (Price & Sang-Wook Kim, 1993). The greater participation of women in the military justified the importance of researching the effect of gender on OPTEMPO and turnover. The participant was asked to provide their gender of male or female in item number 2 (n = 2,208: Male = 1,196; Female = 1,012). The original data set was coded with Male equal to "1" and Female equal to "2", for the purpose of this study the data was recoded to have Male equal to "0" and Female equal to "1". Male and Female are considered nominal data and coding them "0" and "1" ensured the variables accurately captured the true effect gender had on the proposed model.

CHAPTER 4

RESULTS

Preface

A summary of the results of the study is provided in the following chapter. The focus of the study was to determine the effects of OPTEMPO on turnover intentions, and the best method to determine these relationships was to use regression analysis. Regression analysis is a way of predicting some kind of outcome from one or more predictor variables (Field, 2005). The complexity of the model studied required the hypotheses to be evaluated using multiple regression to assess the variance OPTEMPO explains with regards to intent to leave. Multiple regression analyses were also used to evaluate whether or not organizational commitment, job satisfaction, rank, and gender moderated the influence of OPTEMPO on intent to turnover.

Descriptive Information

The descriptive and correlation analysis of the independent and dependent variables resulted in evidence that job satisfaction and organizational commitment are correlated to turnover intentions. Job satisfaction and organizational commitment were negatively related to turnover intentions ($r = -.57$ and $-.62$, $p < .001$, respectively). These results are consistent with past research and turnover models which have included organizational commitment and job satisfaction as states initiating the withdrawal process (Hom & Griffeth, 1995). Contemporary models have accepted organizational commitment and job satisfaction, but there is still controversy of the exact location of the constructs in the model (Hom & Griffeth, 1995). For the purpose of this study organizational commitment and job satisfaction were evaluated as moderators in the OPTEMPO turnover model.

Another independent variable with a moderately high correlation ($r = .34$, $p < .001$) was OPTEMPO and Rank. These two independent variables were expected to be correlated because as military members increase in rank their scope of responsibility increases. With an increase in responsibility comes increased time at work, which would increase the OPTEMPO of higher ranking military members. In a study on OPTEMPO conducted by Huffman et al. (2001) the work hours per day increased from 11.1 hours per day for junior enlisted to 11.9 hours per day for NCOs, and 12.9 hours per day for officers (Huffman, et al. 2001). A similar trend was evident with days worked per week with junior enlisted working 5.2 days per week, senior NCOs working 5.6 days per week, and officers working 6.0 days per week (Huffman, et al. 2001).

Similar support was found for negative correlation in the independent variables Gender and OPTEMPO. OPTEMPO and Gender were weakly related ($r = -.17$, $p < .001$). The small negative correlation between OPTEMPO and Gender is expected because the assignment of deployments, TDYs, and work hours in the military is not dependent on the individual's gender. All OPTEMO related measures are assigned equally among the genders. An alternate explanation of the negative correlation is women are not generally assigned to combat units, and the type of unit often determines the levels of OPTEMPO experienced (Huffman et al., 2005). All findings concerning correlation are illustrated in Table C1 of Appendix C.

Insert Table C1 about here

Test of Hypotheses

Prior to conducting regression analysis the data was evaluated to determine if inaccurately coded data would be an issue. Histograms were created for each of the main variables and no outliers were discovered; thus, it was confirmed that the data for the study was

accurate. The relationship between OPTEMPO and intent to leave was a good model to be

evaluated using linear regression. But, in order to draw conclusions about the Air Force

population used in the study, several assumptions must first be met. The basic assumptions

required for linear regression are non-zero variance, no perfect multicollinearity, predictors are

uncorrelated with external variables, homoscedacity, independent errors, normally distributed

errors, independence, and linearity (Field, 2005). All of the assumptions for linear regression

were met, except multicollinearity. The histogram of the standardized residuals approximately

follows the normal curve which confirmed the assumption of normality of the error term, also the

P-P plot of the standardized residual also indicated the normality assumption is not violated.

Additionally, the plot of the residuals by the predicted values indicated the data was randomly

and evenly dispersed throughout the plot, which is indicative of the assumptions of linearity and

homoscedacity being met. The Durbin-Watson test revealed there was not an issue with adjacent

residuals being correlated, with a score of 1.99 the assumption of independent errors was

considered valid. The collinearity statistics confirmed the assumption that multicollinearity was

not an issue. All of the variables had variance inflation factors (VIF) less than two and

tolerances that were not close to zero. The only exceptions to this was OPTEMPO (VIF = 26.4

and Tolerance = .04) and OPTEMPO squared (VIF = 26.0 and Tolerance = .04). Further

evaluation of the collinearity diagnostics confirm that OPTEMPO (Eigenvalue = .02) and

OPTEMPO squared (Eignenvalue = .00) might have an issue with multicollinearity because their

eigenvalues are close to zero. To avoid other undue issues with multicollinearity between the

main effects and interaction effects mean centered variables were used prior to calculating the

interaction effect. Additionally, the condition index for OPTEMPO (Condition Index = 19.4) is

greater than 15 which indicates a possible problem with multicollinearity and OPTEMPO

squared (Condition Index = 49.1) has a condition index of greater than 30 which indicates a possible serious problem with multicollinearity. To avoid other undue issues with multicollinearity between the main effects and interaction effects mean centered variables were used prior to calculating the interaction effect. Further evaluation of the initial model showed there were too many predictors in the model. There are two non-significant coefficients, indicating that Rank, and OPTEMPO did not contribute much to the proposed model. In contrast, the ANOVA results indicated the regression and residual sums of squares were at about a 1-1 ratio, which indicated that nearly all the variation in turnover intentions was explained by the proposed turnover model. Additionally the significance value of the F statistic was less than .05 which indicated the variation explained by the model was not due to chance.

SPSS (version 12.0) predictive analysis software was used to perform the linear regression analysis for this study. Hypothesis 1 stated OPTEMPO will have a curvilinear relationship with turnover intentions in which individuals with low OPTEMPO will have a high turnover intention and individuals with high OPTEMPO will have a high turnover intention. To test this hypothesis, one step-wise regression was computed with the control variables rank and gender placed in separate blocks. The subsequent blocks of the regression were comprised of the remaining independent variables and were entered in the following order: job satisfaction, organizational commitment, OPTEMPO and OPTEMPO^2. Use of the step-wise method allowed for the individual assessment of the relationship between OPTEMPO and turnover intentions. The first step in the regression analysis was to evaluate the change in R^2 values to determine the amount of incremental variance accounted for by the independent variables. Additionally, the significant change in F values was compared to determine if the independent variables had a significant influence on the dependent variable turnover intentions. The variance accounted for

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by each of the independent variables was significant, except for OPTEMPO and OPTEMPO^2 (Rank ΔR^2 = .05, p < .001, ΔF = 28.19; Gender ΔR^2 = .00, p < .001, ΔF = 7.76; Job Satisfaction ΔR^2 = .29, p < .001, ΔF = 906.29; Organizational Commitment ΔR^2 = .13, p < .001, ΔF = 513.29). Model 1 produced an overall R^2 = .48 and an adjusted R^2 = .47 which accounted for the total variance due to the independent variables of gender, rank, job satisfaction, organizational commitment, OTEMPO, and OPTEMPO^2. A summary of the R^2 values and change in F values are illustrated in Table D1 in Appendix D. In Model 1 Gender (β = .05, p = .00), Job Satisfaction (β = -.29, p = .00), and Organizational Commitment (β = -.44, p = .00) were significantly related to turnover intentions. Because there was no statistical significance associated with the OPTEMPO and the OPTEMPO^2 variables, the results did not support the presence of a curvilinear relationship between OPTEMPO and turnover intentions. In summation, the data did not support Hypothesis 1 and there was no curvilinear or linear relationship between OPTEMPO and turnover intentions.

Insert Table D1 about here

Hypothesis 2 was assessed in model 2. The test of Hypothesis 2 examined the negative moderating effect of organizational commitment on the relationship between OPTEMPO and turnover intentions. To test this hypothesis, one regression was computed with the control variables rank and gender. The subsequent blocks of the regression were comprised of the remaining independent variables and were entered in the following order: job satisfaction, organizational commitment, OPTEMPO, OPTEMPO^2, OPTEMPO X Organizational Commitment, and OPTEMPO^2 X Organizational Commitment. The step-wise method of entering the variables allowed for the analysis of the possible moderating effects of job

satisfaction on the relationship between OPTEMPO and turnover intentions. The standardized

regression coefficient and the significant change in F values for the moderating variable

Organizational Commitment were evaluated to determine if there was a significant influence on

turnover intentions. Model 2 produced an R^2 = .48 and an adjusted R^2 = .47. A summary of the

R^2 values and change in F values are illustrated in Table D2 in Appendix D. In Model 2 Gender

(β = .05, p = .00), Job Satisfaction (β = -.29, p = .00), and Organizational Commitment (β = -.55,

p = .00) were significantly related to turnover intentions. The results of the linear regression

showed there was no significant relationship between the moderating variable of organizational

commitment and the relationship between OPTEMPO and turnover intentions. The standardized

regression coefficient and change in F were not found to be significant for the moderating

variable Organizational Commitment (β = -.05, p > .1). Therefore, the results provided no

support for Hypothesis 2. There was no moderating relationship between organizational

commitment and the relationship between OPTEMPO and turnover intentions.

Insert Table D2 about here

In order to test Hypothesis 3, a new independent variable comprised of the product of job

satisfaction and OPTEMPO was created. Hypothesis 3 was assessed in model 3. The test of

Hypothesis 3 examined the negative moderating effect of job satisfaction on the relationship

between OPTEMPO and turnover intentions. To test this hypothesis, one regression was

computed with the control variables rank and gender. The subsequent blocks of the regression

were comprised of the remaining independent variables and were entered in the following order:

job satisfaction, organizational commitment, OPTEMPO, $OPTEMPO^2$, OPTEMPO X Job

Satisfaction, and $OPTEMPO^2$ X Job Satisfaction. The step-wise method of entering the

variables allowed for the analysis of the possible moderating effects of job satisfaction on the relationship between OPTEMPO and turnover intentions. The standardized regression coefficient and the significant change in F values for the moderating term were evaluated to determine if there was a significant influence on turnover intentions. Model 3 produced an R^2 = .48 and an adjusted R^2 = .47. A summary of the R^2 values and change in F values are illustrated in Table D3 in Appendix D. In Model 3 Gender (β = .05, p = .00), Job Satisfaction (β = -.28, p = .00), and Organizational Commitment (β = -.44, p = .00) were significantly related to turnover intentions. The standardized regression coefficient and change in F were not found to be significant for the moderating variable Job Satisfaction (β = .03, p > .1). The results provided no support for Hypothesis 3.

Insert Table D3 about here

Hypothesis 4 was assessed in model 4. The test of Hypothesis 4 examined the negative moderating effect of gender on the relationship between OPTEMPO and turnover intentions. To test this hypothesis, one regression was computed with the control variables rank and gender. The subsequent blocks of the regression were comprised of the remaining independent variables and were entered in the following order: job satisfaction, organizational commitment, OPTEMPO, OPTEMPO^2, OPTEMPO X Gender, and OPTEMPO^2 X Gender. The step-wise method of entering the variables allowed for the analysis of the possible moderating effects of job satisfaction on the relationship between OPTEMPO and turnover intentions. The standardized regression coefficient and the significant change in F values for the moderating term Gender were evaluated to determine if there was a significant influence on turnover intentions. Model 4 produced an R^2 = .48 and an adjusted R^2 = .47. A summary of the R^2 values

and change in F values are illustrated in Table D4 in Appendix D. In Model 4 Job Satisfaction (β = -.29, p = .00) and Organizational Commitment (β = -.44, p = .00) were significantly related to turnover intentions. The standardized regression coefficient and change in F were not found to be significant for the moderating variable Gender (β = .02, p > .1). Therefore, the results provided no support for Hypothesis 4. There was no moderating relationship between gender and the relationship between OPTEMPO and turnover intentions.

Insert Table D4 about here

Hypothesis 5 was assessed in model 5. The test of Hypothesis 5 examined the negative moderating effect of rank on the relationship between OPTEMPO and turnover intentions. To test this hypothesis, one regression was computed with the control variables rank and gender. The subsequent blocks of the regression were comprised of the remaining independent variables and were entered in the following order: job satisfaction, organizational commitment, OPTEMPO, OPTEMPO^2, OPTEMPO X Rank, and OPTEMPO^2 X Rank. The step-wise method of entering the variables allowed for the analysis of the possible moderating effects of job satisfaction on the relationship between OPTEMPO and turnover intentions. The standardized regression coefficient and the significant change in F values for the moderating term Rank were evaluated to determine if there was a significant influence on turnover intentions. Model 5 produced an R^2 = .48 and an adjusted R^2 = .47. A summary of the R^2 values and change in F values are illustrated in Table D5 in Appendix D. In Model 4 Gender (β = .05, p = .00), Job Satisfaction (β = -.29, p = .00), and Organizational Commitment (β = -.44, p = .00) were significantly related to turnover intentions. The results of the linear regression showed there was

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no significant relationship between the moderating variable of rank and the relationship between OPTEMPO and turnover intentions. The standardized regression coefficient and change in F were not found to be significant for the moderating variable Rank (β = -.04, p > .1). Therefore, the results provided no support for Hypothesis 5. There was no moderating relationship between rank and the relationship between OPTEMPO and turnover intentions.

Insert Table D5 about here

The analysis of the data indicated that none of the research hypotheses were supported, which leads to an additional question, does OPTEMPO have a significant relationship with turnover intentions when job satisfaction and organizational commitment are not present. In order to test this additional research question, two models were tested to examine the relationship between OPTEMPO and turnover intentions and OPTEMPO^2 and turnover intentions without the presence of job satisfaction and organizational commitment. To test this additional research question two regressions were computed with the control variables rank and gender. The subsequent blocks of the regression were comprised of OPTEMPO for the first regression and OPTEMPO and OPTEMPO^2 for the second regression. The standardized regression coefficient and the significant change in F values OPTEMPO and OPTEMPO^2 were evaluated to determine if there was a significant influence on turnover intentions.   Model 6 produced an R^2 = .06 and an adjusted R^2 = .06. In Model 6 OPTEMPO (β = .07, p = .00) was significantly related to turnover intentions. Therefore, the linear regression indicated there was a significant relationship between OPTEMPO and turnover intentions. Although there is a significant relationship the low R^2 value suggested the amount of variance explained by the model was very low. There are additional constructs that influenced an individual's turnover intention. Model 7 produced an R^2 = .06 and

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an adjusted $R^2 = .06$. In Model 7 OPTEMPO ($\beta = .12$, $p > .05$) and OPTEMPO^2 ($\beta = -.05$, $p > .05$) were not significantly related to turnover intentions. Therefore, the linear regression indicated there is not a significant relationship between OPTEMPO^2 and turnover intentions. The results shown in Appendix G, Table G1 are inconsistent with the results provided by Huffman et al. (2005) which reported a curvilinear relationship existed between OPTEMPO and turnover intentions.

Insert Table F1 and Table G1 about here

Summary

This chapter provided a summary of the results from the August 2004 Status of Forces Survey. The analysis focused on the effect of OPTEMPO on turnover intentions in the Air Force when accounting for job satisfaction and organizational commitment. The results of this analysis suggest OPTEMPO does not have a significant curvilinear relationship with turnover intentions of members of the Air Force. Further analysis suggested there was no relationship at all between an Air Force member's OPTEMPO and their turnover intentions when accounting for job satisfaction and organizational commitment. Because of the lack of a relationship there is no evidence to support the moderating influence of rank, gender, job satisfaction, and organizational commitment on OPTEMPO and turnover intentions. Although the research hypotheses were not supported, the data do show a significant linear relationship between OPTEMPO and turnover intentions. The relationship is statistically significant, but the data also indicated there are other factors that influenced turnover intentions in addition to high OPTEMPO. In addition, although the results for OPTEMPO were significant the values indicate that as OPTEMPO increases by one standard deviation (2.35), turnover intentions increase by .07 standard deviations. The

standard deviation for turnover intentions is 1.30 and so this constitutes a change of .09 in

turnover intentions. Therefore, for every 2.35 increase in OPTEMPO, an increase in turnover

intentions of .09 will occur. An influence this small will not cause an individual to increase their

overall turnover intentions from one category to another. A summary of the results of the

regression analysis for all models tested is shown in Appendix E, Table E1.

Insert Table E1 about here

CHAPTER 5

DISCUSSION

OPTEMPO

This study explored the relationship between OPTEMPO measures and turnover intentions. The main goal of the research was to address the inconsistent findings associated with OPTEMPO's effect on turnover. The principal finding is that OPTEMPO does not have a significant curvilinear relationship with turnover intentions when accounting for job satisfaction and organizational commitment. Therefore, there is no evidence supporting individuals with low OPTEMPO will have a high turnover intention and individuals with high OPTEMPO will have a high turnover intention. This finding is in contrast to the evidence reported by Huffman et al. (2005), who suggested the relation between OPTEMPO and turnover intentions might be curvilinear (Huffman et al., 2005). Further findings indicated there is no significant relationship between OPTEMPO and turnover intentions when accounting for job satisfaction and organizational commitment. These findings are consistent with the findings of Castro et al. (1999) and Reed and Segal (2000) who found OPTEMPO either to be related to a soldier's intentions to stay in the military, or had no effect at all.

It is possible that the results of this study are caused by military members self selecting into the military because they desire to have an occupation with high OPTEMPO. Individuals joining the military know deployments, TDYs, training exercises, and long work hours will be part of the occupation. These individuals feel high OPTEMPO is a positive aspect of the job and are willing to accept the consequences of a high OPTEMPO occupation. Individuals who have positive feelings about OPTEMPO are not likely to leave the military when OPTEMPO increases.

The second key finding of the study was that job satisfaction and organizational commitment did not have a moderating effect on the relationship between OPTEMPO and turnover intentions. This result supports the evidence that there appeared to be no relationship between OPTEMPO and turnover intentions when accounting for job satisfaction and organizational commitment. Results did support the relationship organizational commitment and job satisfaction have on turnover, and because of this, these variables would be expected to have an influence on the independent variable of OPTEMPO and its effect on turnover. Support for this finding is found in the significantly negative relationship between job satisfaction, organizational commitment and turnover intentions ($r = -.57$ and $-.62$, $p < .001$, respectively). Namely, as job satisfaction and organizational commitment increased, turnover intentions significantly decreased.

Individual Characteristics

The third key finding of the study was that rank and gender did not have a moderating effect on the relationship between OPTEMPO and turnover intentions when accounting for job satisfaction and organizational commitment. The data did not support prior research which had shown junior enlisted members were more likely to report they intend to leave the service than NCOs and officers (Castro et al., 1999). It, in fact, suggested the opposite, as rank increased, it did not significantly decrease the likelihood of turnover. This demonstrates that rank does not play a role in determining the relationship between OPTEMPO and turnover. Although the data did not show an effect on turnover, it did demonstrate an increase in OPTEMPO as individuals increased in rank. E1 – E4s in the Air Force experienced an OPTEMPO level of 5.57 while 04 – 06s experienced an OPTEMPO level of 7.56. This increase in OPTEMPO did not increase an individual's intent to turnover. Prior research had demonstrated inconsistent results on the effect

of gender on turnover. This research demonstrates that gender does not have a significant effect on OPTEMPO or turnover intentions.

Limitations

Similar to the research of Huffman et al. (2005) this study had several methodological limitations. A majority of the limitations present in the study are associated with the use of a secondary data set to measure the constructs of the proposed model (Kiecolt & Nathan, 1985). The secondary data set used was the data recorded in the August 2004 Status of Forces Survey administered by the DMDC, and because the survey was administered and data collected by an outside source, methodological issues with the design of the survey could not be addressed. Errors made in the original survey are often no longer visible and are impossible to address (Kiecolt & Nathan, 1985). In addition to overcoming issues with the design of the survey, remedies to overcome common method variance could not be used. For example, using archival data prohibited the study from obtaining information about the constructs OPTEMPO and turnover intentions from different sources (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Also independent from the survey was the possibility of overcoming non-response bias. The survey was originally sent to 38,112 individuals, and 13,396 people responded (Defense Manpower Data Center, 2004). In many cases, it is almost impossible to avoid non-response bias, and to overcome it, the DMDC used a non-proportional random sample to ensure a sufficient number of surveys were returned (Alreck & Settle, 2004). Any additional non-response bias due to the construction of the survey could not be addressed.

Many of the items used in the study required self-reporting of the individual. Specifically, individuals were asked to provide information on how many days they worked more than a normal work day and how many days they were away from their normal duty

station. Research has shown that self-reported work hours can be considered a valid measure of

actual work hours (Jacobs, 1998), but self-reported days on TDY, training exercises, and

deployments does not have supporting research available. Because archival data was used, I was

not able to verify the actual number of days a member was on TDY, training exercises, or

deployments to the number of days they reported on the survey instrument. This limitation

decreases the reliability of the measure because it may not accurately measure a member's true

OPTEMPO level.

Existing research in the field of OPTEMPO has used many different definitions of the

term. The differing definitions have been identified as one of the reasons for conflicting results

on the effect of OPTEMPO on turnover. In order to provide a consistent definition for this

study, the definition introduced by Huffman et al. (2005) was used. Their definition focused on

the rate of military operations as measured by deployments, training exercises, TDY

assignments, and work hours (Huffman et al., 2005). The archival data set used for this study

did not have an item that measured each of the measures in the OPTEMPO definition

individually. The archival data only contained information on the number of days an individual

had worked longer than a normal duty day (Item Number 28) and how many nights an individual

had been away from their permanent duty station because of military duties (Item Number 29)

(Defense Manpower Data Center, 2004). For the purpose of the study the item used to measure

nights away from the individual's permanent duty station was used to measure a combination of

deployments, training exercises, and TDY assignments. In order to gain a better understanding

of the separate influences on OPTEMPO, it would be important to have an individual measure

for each of the areas mentioned. This is also a limitation of other studies which have found that

certain aspects of OPTEMPO are more significantly related to turnover than others, for example

Huffman et al. (2005) found that TDY days and turnover had a significant link (Huffman et al., 2005).

Single-item measures are often discouraged in the field of academic research (Wanous & Hudy, 2001). For this study, single-item measures were used to indicate an individual's turnover intentions (Item Number 23) and job satisfaction (Item Number 21) (Defense Manpower Data Center, 2004). Researchers are often concerned with the measurement reliability associated with single item measures (Wanous & Hudy, 2001). The great cause for concern is due to the inability to estimate single-item reliability, and it is often believed that even if reliability could be estimated it would be extremely low (Wanous & Hudy, 2001). To overcome the perceived issues with single-item reliability, multiple measures would need to be used for turnover intentions and job satisfaction. Although there are many critics against the use of single-item measures, research has shown that reliability estimates can be obtained and they are considered to be in the acceptable levels (Wanous & Hudy, 2001). To silence the remaining critics, multiple established measures of turnover intentions and job satisfaction should be used to increase the validity of the study.

Although there are possible limitations identified in the study conducted, there are also strengths that deserve to be mentioned. Using an archival data set from the DMDC ensured the survey was produced professionally by individuals trained in survey creation and management. The experience of the DMDC helped reduce the possibility of instrumentation bias and response bias present in the survey. The collection and coding of the data was also conducted in a precise and specified manner. When the data was evaluated for outliers and incorrectly coded data, there was no evidence found of these issues. Also, the sample used for the research was a stratified random sample which used weights to reflect the population of interest (Defense Manpower Data

Center, 2004). This method of sampling reduced the possibility of sampling bias, and increased the chance of generalization of the study to the entire Armed Forces population. The data set also included a large sample which increased the reliability and lowered the sampling error of the data provided by the DMDC.

As discussed earlier the linear regression conducted in the study revealed that there is an issue with multicollinearity with OPTEMPO and OPTEMPO squared. The increase in multicolinearity means that the standard of deviation and standard error for the sample distribution are larger (Schwab, 2005). These increases made it harder for the sample to achieve statistically significant results. The presence of multicollinearity also made the sample estimates less reliable predictors of the population parameters (Schwab, 2005). The presence of multicollinearity in this study did cause some undesirable consequences it did not invalidate the regression results that have been reported (Schwab, 2005).

Future Research

Since the effect of OPTEMPO on turnover intentions is still inconclusive, future research should focus on the various aspects of OPTEMPO and the effect they have on turnover. The measurement of OPTEMPO is crucial to further studies, and it is vital to look at all aspects of OPTEMPO to include; deployments, work hours, training exercises, and TDYs. OPTEMPO is determined by a multitude of factors and cannot be measured by only one facet (Huffman et al, 2005). As seen in the review of OPTEMPO, many of the studies used differing definitions to study its effects, and all future research regardless of what branch of the military it focuses on must utilize a consistent definition of OPTEMPO if researchers want to understand the true effect of OPTEMPO on turnover intentions.

Once a unified definition of OPTEMPO is established, all aspects of the definition need to be studied in detail. Deployments, work hours, training exercises, and TDYs need to be evaluated individually to determine the effect each of these measures of OPTEMPO has on turnover intentions. Some aspects of the definition of OPTEMPO can be broken down even further for evaluation. For example, some research has been conducted on the type of deployments military members have been a part of (e.g., hostile vs. non-hostile), and further research should also focus on the types of deployments that are experienced by military members. The limited amount of information on the type of deployments and how they affect turnover needs to be evaluated further. In addition to the different types of deployments, future studies should focus on the type of training and TDYs military members take part in and how these different TDYs affect turnover intentions.

The negative effect of job satisfaction and organizational commitment on turnover intentions of individuals with high OPTEMPO also needs to be addressed in more detail. Extensive research has been conducted on the effect of different aspects of organizational commitment on turnover, and this trend needs to be followed in the field of OPTEMPO. As mentioned before, organizational commitment is generally measured in three separate components; affective commitment, continuance commitment, and normative commitment, each of these components of commitment should be studied separately to uncover the effect each component has on an individual with high OPTEMPO and their turnover intentions. Looking at each component will truly isolate which component has the greatest effect on the proposed turnover model.

When measuring work hours in future studies researchers should also focus on a technique of measuring work hours that is more reliable. This study relied on self-reported work

hours to measure OPTEMPO, and although self-reporting of work hours is considered reliable

the reliability of the sample can increase if it is accurately measured by a source other than the

member. TDYs, training exercises, and deployments can be verified with archival data, but in

order to get an accurate measure of OPTEMPO, work hours should also be measured in a similar

way.

Most importantly, the archival data set used for this study is from 2004, and much has

changed in the amount of OPTEMPO military members are experiencing. Presently all branches

of the Armed Forces are being asked to deploy for longer periods than they were during 2004.

Also, many military members are deploying for these longer periods more frequently. To

capture an accurate reflection of the current attitudes of military members it is important to use

the most up to date data available. Use of current data will provide accurate and definitive

answers to the effect that OPTEMPO has on turnover intentions.

Conclusion

The results presented in this paper contribute to the current research available on the

impact of OPTEMPO on turnover intentions, and also contribute to the findings of Huffman et

al. (2005). Initial findings suggest that OPTEMPO has no effect on turnover when accounting

for job satisfaction and organizational commitment. Individuals who have high job satisfaction

and high OPTEMPO are not likely to demonstrate high turnover intentions. Similarly,

individuals with high organizational commitment and high OPTEMPO are not likely to display

high turnover intentions. It can be implied from these findings that organizations with high

OPTEMPO should focus on increasing job satisfaction and organizational commitment in order

to retain their employees. It is also implied that people in the military self-select into the Armed

Forces because they realize there will be high OPTEMPO and assume the risks associated with high OPTEMPO before entering the military.

The findings of this paper lay the foundation for steps the Air Force can take to overcome turnover during periods of high OPTEMPO. One suggestion includes, acknowledging the increased OPTEMPO as a way of life in the Air Force and other branches of the military. Realistic job preview has undergone extensive academic evaluation to understand its effect on reducing turnover (Hom & Griffeth, 1995). It is perceived that extensive and realistic information about a new job to prospective and new employees may improve their likelihood of remaining with the organization (Hom & Griffeth, 1995). Realistic job previews provide information on both the positive and negative aspects of the new job (Hom & Griffeth, 1995). Individuals may be searching for a career which possesses a high OPTEMPO because they perceive it as a desirable or at least, expected way of life (Reed & Segal, 2000). When individuals searching for a high OPTEMPO job enter the Air Force, they are more likely to have high job satisfaction and high organizational commitment because their job expectations are met. Also, the Air Force should focus on increasing job satisfaction and organizational commitment by encouraging members of the military to have pride in the job they do and that high OPTEMPO is a part of the job. Future research should focus on the specific measures of OPTEMPO, job satisfaction, and organizational commitment in order to identify additional ways to influence turnover decisions.

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Appendix A: Turnover Models

Figure A1: March and Simon's (1958, p. 99 and 106) Model of Motivation

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┌──────────────┐  ┌──────────────┐  ┌──────────────┐       ┌──────────────┐  ┌──────────────┐
│Conformity of │  │Predictability│  │Compatibility │       │Propensity to │  │Visibility of │
│Job to        │  │of Job        │  │of Job and    │       │Search        │  │Individual    │
│Self-Image    │  │Relationships │  │Other Roles   │       │              │  │              │
└──────────────┘  └──────────────┘  └──────────────┘       └──────────────┘  └──────────────┘
                                                                   │                │
┌──────────────┐  ┌──────────────┐                          ┌──────────────┐
│Organization  │  │Job           │             ┌──────────┐ │Number of     │      ┌──────────────┐
│Size          │  │Satisfaction  │             │Personal  │ │Firms Visible │      │Business      │
└──────────────┘  └──────────────┘             │Traits of │ └──────────────┘      │Activity      │
       │                 │                     │Individual│                       └──────────────┘
┌──────────────┐         │                     └──────────┘
│Possibility of│         │                          ┌──────────────────────┐
│Intraoganiza- │         │                          │Number of             │
│tional        │         │                          │Extraorganizational   │
│Transfer      │         │                          │Alternatives Perceived│
└──────────────┘         │                          └──────────────────────┘
       │                 │                                     │
       │  ┌──────────────────────┐                   ┌──────────────────┐
       └─▶│Perceived Desirability│                   │Perceived Ease    │
          │of Movement           │                   │of Movement       │
          └──────────────────────┘                   └──────────────────┘
                      │           ┌──────────────┐            │
                      └──────────▶│Employee      │◀───────────┘
                                  │Turnover      │
                                  └──────────────┘
```

Hom, P., & Griffeth, R. (1995). *Employee Turnover.* Cincinnati, OH: South-Western College Publishing.

75

Figure A2: Price (1977, p. 84) – Relationships Between the Determinants, Intervening Variables, and Turnover
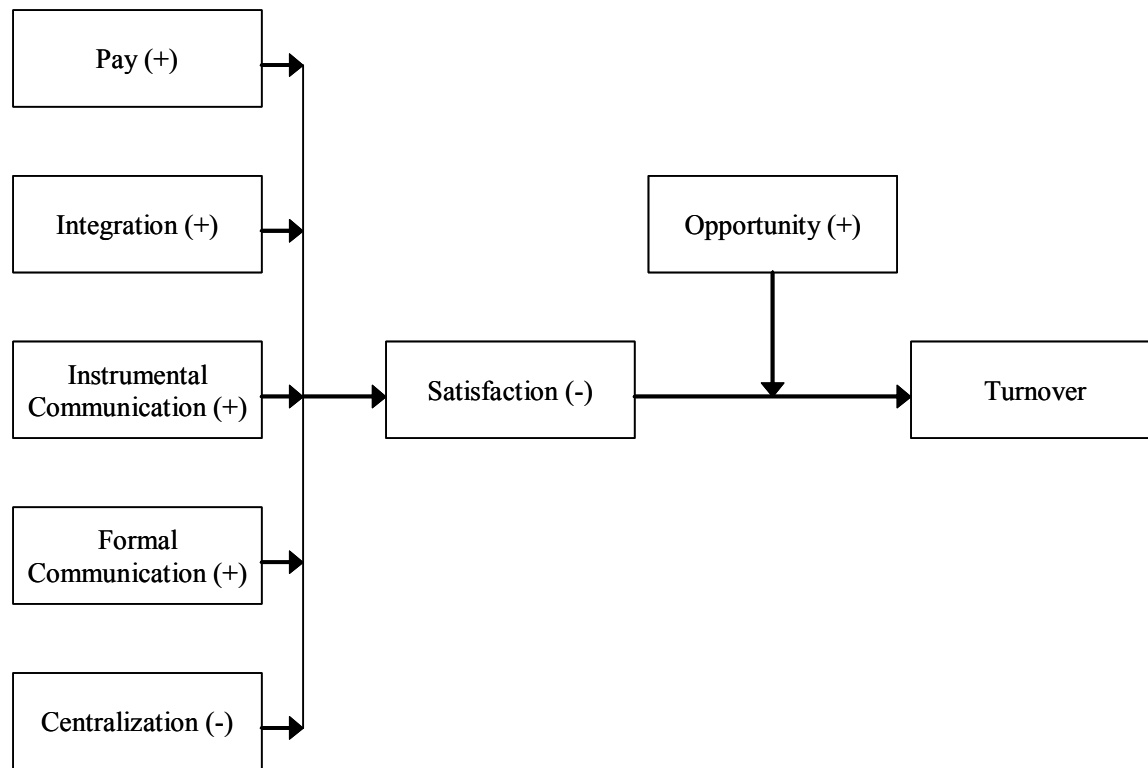
Price, J. L. (1977). *The study of turnover.* Ames; Iowa State University Press.

Figure A3: Mobley's 1977 Model of Intermediate Linkages
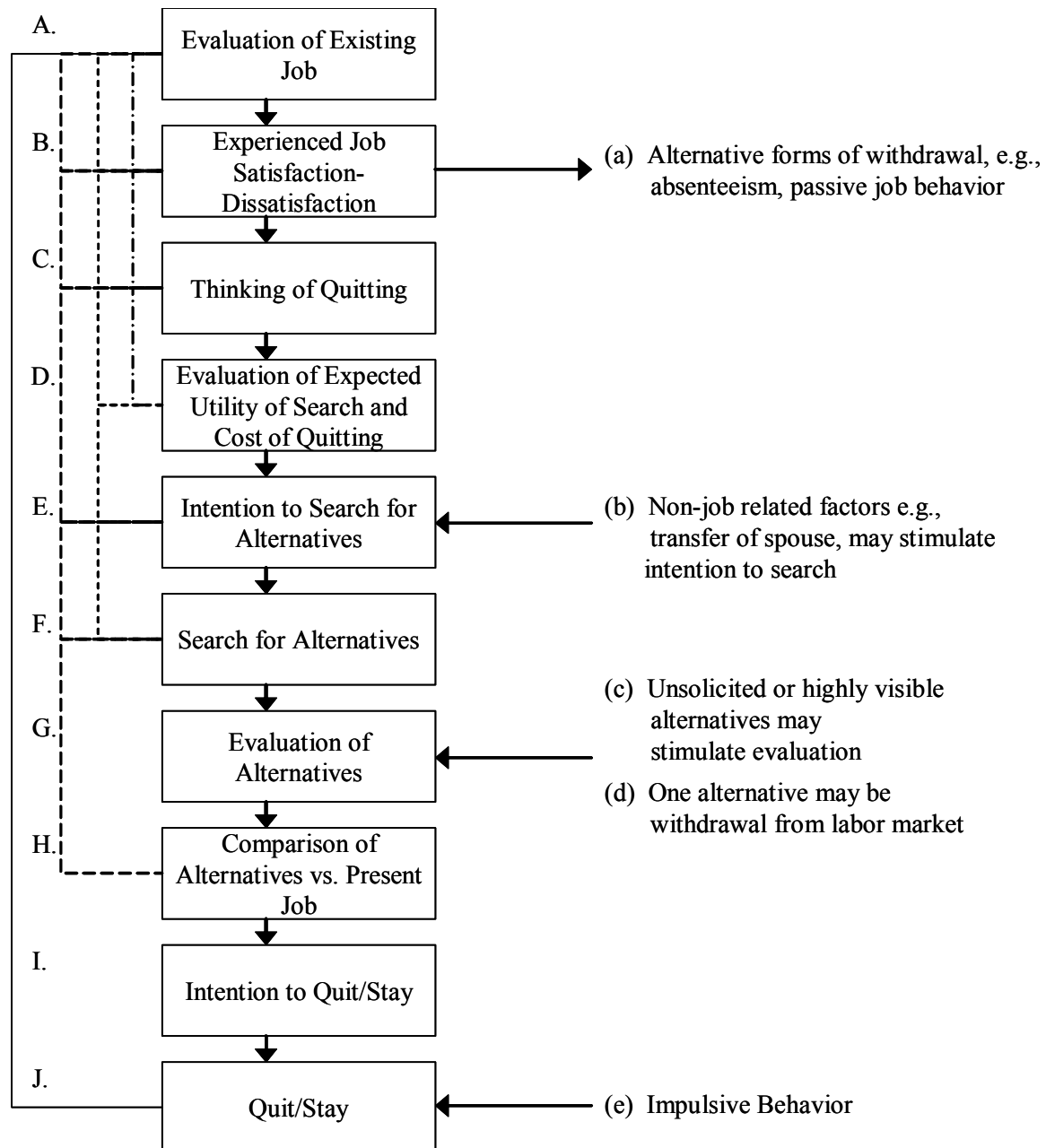
Mobley, W.H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Psychology 62, 238.*

Figure A4: Steers and Mowday's 1981 Model of Turnover
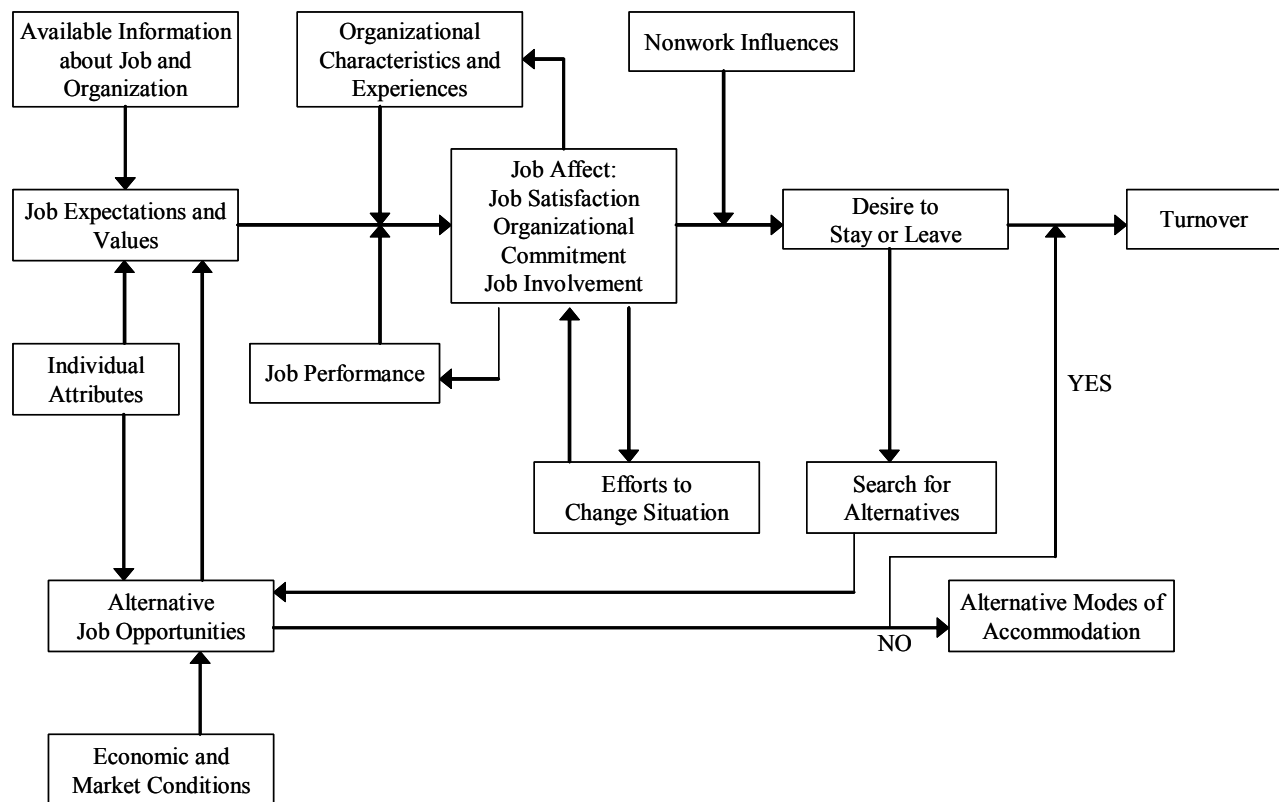
Steers, R. M., & Mowday, R. T. (1981). Employee turnover and the post decision accommodation process. *Research in Organizational Behavior,* Greenwich, Connecticut: JAI Press.

Figure A5: Bluedorn's 1982 Unified Model of Turnover
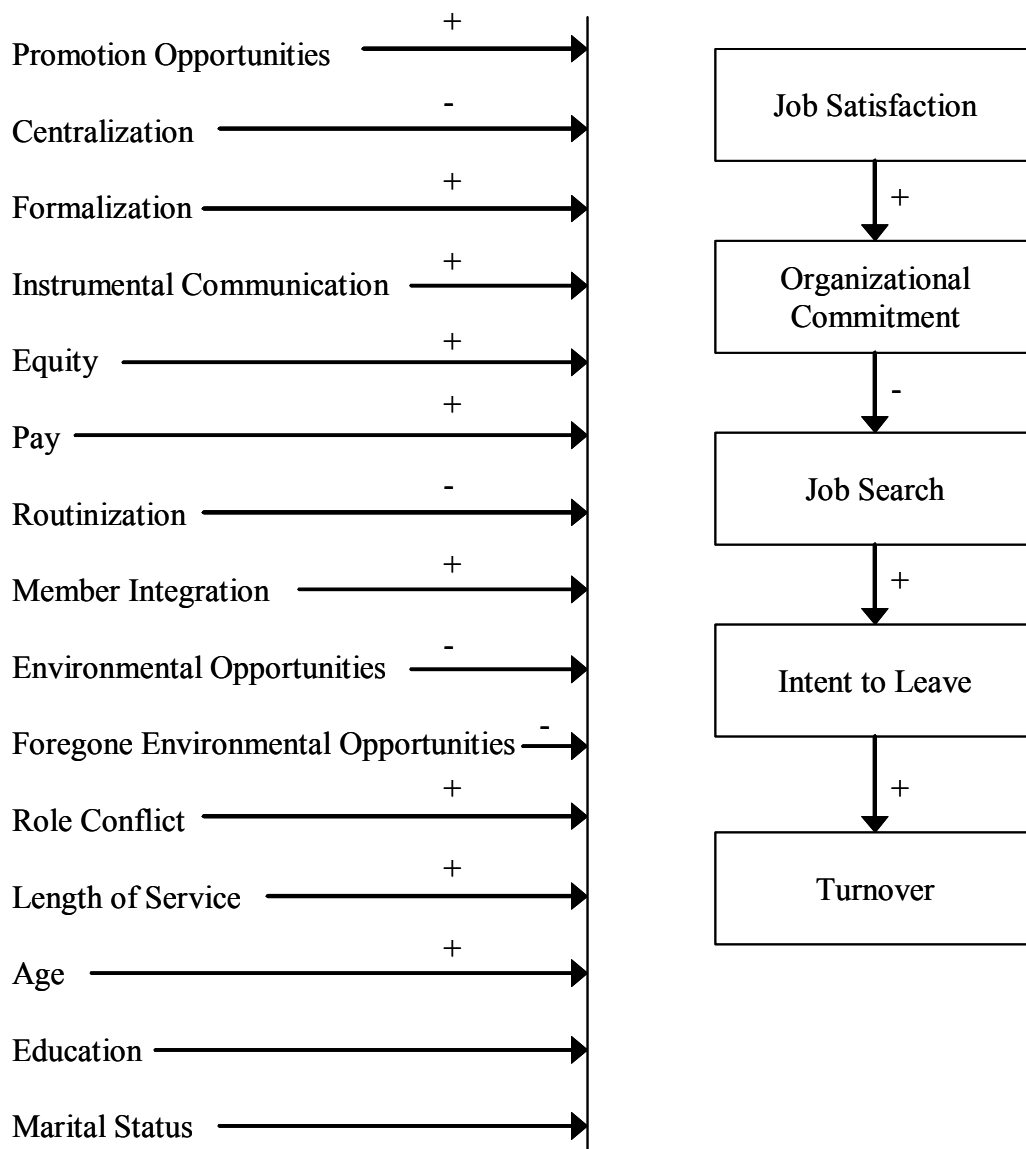
Bluedorn, A.C. (1982). A unified model of turnover from organizations. *Human Relations*, 32(2), 135-153.

Appendix B: Survey Item 81 Descriptive Statistics

Table B1

Survey Item 81 Descriptive Statistics

Question	n	M	sd
81a	2067	4.10	0.93
81b	2060	3.90	1.01
81c	2064	3.48	1.20
81d	2060	2.48	1.19
81e	2063	3.80	0.96
81f	2067	3.41	1.23
81g	2068	3.08	1.19
81h	2068	3.67	1.05
81i	2065	2.12	1.11
81j	2066	4.23	0.81
81k	2067	2.30	1.13
81l	2065	2.61	1.15
81m	2066	3.64	0.99
81n	2066	2.44	1.15
81o	2068	3.55	1.21

Appendix C: Correlation Table

Table C1

Descriptive Statistics and Correlations

Variable	Mean	s.d.	N	1	2	2a	2b	2c	2d	3	4	5	6
1. Turnover Intentions	3.70	1.31	206	1.00									
2. Rank	2.61	1.44	206	-0.16***	1.00								
2a. E1 - E4				0.20***		1.00							
2b. E5 - E9				-0.08***		-0.47***	1.00						
2c. O1 - O3				0.02		-0.28***	-0.40***	1.00					
2d. O4 - O6				-0.15***		-0.25***	-0.36***	-0.21***	1.00				
3. Gender	1.45	0.50	206	0.10***	0.10***	0.19***	-0.18***	0.07***	-0.06***	1.00			
4. Job Satisfaction	3.76	0.94	206	-0.57***	-0.57***	-0.20***	0.04*	0.03	0.15***	-0.03	1.00		
5. Organizational	3.25	0.6	206	-	-0.62	-	0.07***	-0.04	0.03	-0.05	0.57**	1.00	

Commitment			9	4	0.62***		0.07***						*	
6. OPTEMPO	6.60	2.3	206	-0.01	-	-	-	0.23***	0.18***	-	-0.02	-	1.0	
		3	4		0.01***	0.25***	0.10***			0.17***		0.08***	0	

 * $p < 0.05$, one-tailed test
 ** $p < 0.01$, one-tailed test
*** $p < 0.001$, one-tailed test

Appendix D: Model Summaries

Table D1

Model 1 Summary

Variables	Model 1				
	R^2	Adjusted R^2	R^2 Change	F Change	Sig. F Change
Gender	0.06	0.05	0.00	7.76	0.01
Rank	0.05	0.05	0.05	28.19	0.00
Organizational Commitment	0.48	0.47	0.13	513.29	0.00
Job Satisfaction	0.34	0.34	0.29	906.29	0.00
OPTEMPO	0.48	0.47	0.00	0.22	0.64
OPTEMPO^2	0.48	0.47	0.00	0.02	0.90

Table D2

Model 2 Summary

Variables	Model 2				
	R^2	Adjusted R^2	R^2 Change	F Change	Sig. F Change
Gender	0.06	0.05	0.00	7.76	0.01
Rank	0.05	0.05	0.05	28.19	0.00
Organizational Commitment	0.48	0.47	0.13	513.29	0.00
Job Satisfaction	0.34	0.34	0.29	906.29	0.00
OPTEMPO	0.48	0.47	0.00	0.22	0.64
OPTEMPO^2	0.48	0.47	0.00	0.02	0.90
OPTEMPO X Organizational Commitment	0.48	0.47	0.00	0.69	0.41
OPTEMPO^2 X Organizational Commitment	0.48	0.47	0.00	0.70	0.40

Table D3

Model 3 Summary

Variables	Model 3				
	R^2	Adjusted R^2	R^2 Change	F Change	Sig. F Change
Gender	0.06	0.05	0.00	7.76	0.01
Rank	0.05	0.05	0.05	28.19	0.00
Organizational Commitment	0.48	0.47	0.13	513.29	0.00
Job Satisfaction	0.34	0.34	0.29	906.29	0.00
OPTEMPO	0.48	0.47	0.00	0.22	0.64
OPTEMPO^2	0.48	0.47	0.00	0.02	0.90
OPTEMPO X Job Satisfaction	0.48	0.47	0.00	0.50	0.48
OPTEMPO^2 X Job Satisfaction	0.48	0.47	0.00	3.56	0.06

Table D4

Model 4 Summary

Variables	Model 4				
	R^2	Adjusted R^2	R^2 Change	F Change	Sig. F Change
Gender	0.06	0.05	0.00	7.76	0.01
Rank	0.05	0.05	0.05	28.19	0.00
Organizational Commitment	0.48	0.47	0.13	513.29	0.00
Job Satisfaction	0.34	0.34	0.29	906.29	0.00
OPTEMPO	0.48	0.47	0.00	0.22	0.64
OPTEMPO^2	0.48	0.47	0.00	0.02	0.90
OPTEMPO X Gender	0.48	0.47	0.00	2.54	0.11
OPTEMPO^2 X Gender	0.48	0.47	0.00	0.00	0.95

Table D5

Model 5 Summary

Variables	Model 5				
	R^2	Adjusted R^2	R^2 Change	F Change	Sig. F Change
Gender	0.06	0.05	0.00	7.76	0.01
Rank	0.05	0.05	0.05	37.57	0.00
Organizational Commitment	0.48	0.47	0.13	513.29	0.00
Job Satisfaction	0.34	0.34	0.29	906.29	0.00
OPTEMPO	0.48	0.47	0.00	0.22	0.64
$OPTEMPO^2$	0.48	0.47	0.00	0.02	0.90
OPTEMPO X Rank	0.48	0.47	0.00	0.00	1.00
$OPTEMPO^2$ X Rank	0.48	0.47	0.00	0.29	0.59

Appendix E: Regression Results

Table E1

Results of Regression Analysis

Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	Std. Error	β	B	Std. Error	β	B	Std. Error	β	B	Std. Error	β	B	Std. Error	β
(Constant)	6.57	0.97		7.27	0.84		6.47	0.97		6.59	0.98		6.55	0.22	
Gender	0.13***	0.04	0.05	0.13***	0.04	0.05	0.13***	0.04	0.05	0.11	0.35	0.04	0.13***	0.04	0.05
Rank															
E1 - E4	0.20	0.95	0.07	0.20	0.95	0.07	0.20	0.95	0.06	0.25	0.95	0.08	0.34	0.14	0.11
E5 - E9	-0.07	0.95	-0.03	-0.08	0.95	-0.03	-0.08	0.95	-0.03	-0.03	0.95	-0.01	0.00	0.00	0.00
O1 - O3	0.00	0.95	0.00	-0.01	0.95	0.00	0.00	0.95	0.00	0.03	0.95	0.01	-0.06	0.25	-0.02
O4 - O6	-0.29	0.95	-0.08	-0.30	0.95	-0.08	-0.29	0.95	-0.08	-0.25	0.95	-0.07	-0.41	0.37	-0.12
Organizational Commitment	-.84***	0.04	-0.04	-1.06***	0.26	-0.55	-0.84***	0.04	-0.44	-0.85***	0.04	-0.44	-0.84***	0.04	-0.44
Job Satisfaction	-0.41***	0.03	-0.03	-0.41***	0.03	-0.29	-0.39***	0.03	-0.28	-0.41***	0.03	-0.29	-0.41***	0.03	-0.29
OPTEMPO	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.05	0.00	-0.01	0.05	-0.02	0.00	0.05	-0.01
OPTEMPO^2	0.00	0.00	-0.01	-0.01	0.02	-0.33	0.00	0.00	0.09	0.00	0.00	0.02	0.00	0.00	-0.01
OPTEMPO X Organizational Commitment				-0.05	0.07	-0.05									
OPTEMPO^2 X Organizational				0.00	0.01	0.35									

Commitment					
OPTEMPO X Job Satisfaction			0.02	0.01	0.03
OPTEMPO^2 X Job Satisfaction			0.00	0.00	-0.10
OPTEMPO X Gender				0.02	0.09	0.02
OPTEMPO^2 X Gender				0.00	0.01	0.01
OPTEMPO X Rank					-0.09	0.04	-0.04
OPTEMPO^2 X Rank					0.00	0.00	0.09
R^2 / Adjusted R^2	.475 / .473	.476 / .473	.476 / .473	.476 / .473	.475 / .473

* p < 0.05, one-tailed test
** p < 0.01, one-tailed test
*** p < 0.001, one-tailed test

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Appendix F: OPTEMPO Correlation Table

Table F1

Descriptive Statistics and Correlations

Variable	Mean	s.d.	N	1	2	2a	2b	2c	2d	3	4
1. Turnover Intentions	3.70	1.31	2064	1.00							
2. Rank	2.61	1.44	2064	-0.16***	1.00						
2a. E1 - E4				0.20***		1.00					
2b. E5 - E9				-0.08***		-0.48***	1.00				
2c. O1 - O3				0.02		-0.28***	-0.40***	1.00			
2d. O4 - O6				-0.15***		-0.25***	-0.36***	-0.21***	1.00		
3. Gender	1.45	0.50	2064	0.09***	-0.07***	0.19***	-0.18***	0.06***	-0.06***	1.00	
6. OPTEMPO	6.60	2.33	2064	0.00	0.34***	-0.25***	-0.10***	0.24***	0.18***	-0.18***	1.00

  * $p < 0.05$, one-tailed test
 ** $p < 0.01$, one-tailed test
*** $p < 0.001$, one-tailed test

Appendix G: OPTEMPO Regression Results

Table G1

Results of Regression Analysis

Variables	Model 6			Model 7		
	B	Std. Error	β	B	Std. Error	β
(Constant)	1.85	1.27		1.76	1.28	
E1 - E4	0.59	1.27	0.20	0.59	1.27	0.20
E5 - E9	0.02	1.27	0.01	0.02	1.27	0.01
O1 - O3	0.14	1.27	0.04	0.14	1.27	0.04
O4 - O6	-0.34	1.27	-0.10	-0.35	1.27	-0.10
Gender	0.16***	0.06	0.06	0.16***	0.06	0.06
OPTEMPO	0.04***	0.01	0.07	0.07	0.06	0.12
OPTEMPO2				0.00	0.01	-0.05
R2 / Adjusted R2	.058 / .056			.058 / .055		

   * $p < 0.05$, one-tailed test
  ** $p < 0.01$, one-tailed test
*** $p < 0.001$, one-tailed test

Appendix H: Status of Forces Survey

**Welcome to the DMDC
Survey Operations Center Web Site**

This site hosted by:
DATA RECOGNITION
DRC
CORPORATION

Please enter your Ticket Number to access your survey, and then click the Continue button.

[Continue]

Security Protection Advisory

DoDSurvey.net is maintained by Data Recognition Corporation, Maple Grove, MN.

August 2004 Status of Forces Survey of Active-Duty Members

RCS:DD-P&R(AR)2145
Exp.05/23/2005

Welcome!

Thank you for visiting this Web site now to update information useful in the survey administration. Information requested now is not the actual survey - be sure to come back later (on or about 26 July) to do the actual survey. When you click the Continue button below, you will be asked to:

- Read the Privacy Act Statement if you choose.
- Review your contact information.
- Provide your e-mail address(es) so we can communicate with you about the survey.

Thank you, again, for your time and participation.

[Continue]

Frequently Asked Questions / How to Contact Us

PRIVACY ACT STATEMENT FOR STATUS OF FORCES SURVEYS

In accordance with the Privacy Act, this notice informs you of the purpose of the Status of Forces Surveys and how the findings of these surveys will be used. Please read it carefully.

AUTHORITY: 10 United States Code, Sections 136, 1782, and 2358.

PRINCIPAL PURPOSE: Information collected in this survey will be used to report attitudes and perceptions about personnel programs and policies. This information will assist in the formulation of policies which may be needed to improve the working environment. Reports will be provided to the Office of the Secretary of Defense, each Military Department, and the Joint Chiefs of Staff. Findings will be used in reports and testimony provided to Congress. Some findings may be published by the Defense Manpower Data Center (DMDC) or in professional journals, or presented at conferences, symposia, and scientific meetings. In no case will the data be reported or used for identifiable individuals.

ROUTINE USES: None.

DISCLOSURE: Providing information on this survey is voluntary. There is no penalty if you choose not to respond. However, maximum participation is encouraged so that the data will be complete and representative. Your survey responses will be treated as confidential. Identifying information will be used only by persons engaged in, and for purposes of, the survey research.

SECURITY PROTECTION ADVISORY

WEB SITE PRIVACY: The Department of Defense and Data Recognition Corporation will collect no personal information about you when you visit this Web site unless you choose to provide it yourself. If you supply us with personal information, it will be treated as confidential.

In addition, our system does not enable "cookies," which are files placed on your computer's hard drive in order to monitor your use of the site or the Web. For more information about your privacy rights, please read the Privacy Act Notice at the start of the survey.

This Web site does gather and store certain data from your visit. This non-personal information makes the site helpful to you by recognizing the types of technology you use. The data collected appear below:

1. Your Internet host or domain (for example, "youragency.mil" if you connect from a military domain; "yourschool.edu" if you connect from a university's domain; or "yourcompany.com" if you use a private Internet access account). Other examples of domains are compuserve.com and aol.com.
2. Your Internet Protocol (IP) address (for example, www.compuserve.com, www.aol.com, 122.3.55.34). Depending on your Internet service provider, IP addresses may identify your computer; in other cases, they identify no more than your Internet service provider (such as AOL or Earthlink). This is stored for troubleshooting technical problems.
3. The type and version of the browser and operating system you use to access our site.
4. The date and time you access this site.
5. The pages you visit.

None of this information will be revealed publicly or used to identify you.

ABOUT THIS QUESTIONNAIRE

What is the Status of Forces Survey (SOFS) Program?
- SOFS is a Department of Defense (DoD) personnel survey program that features short, Web-based surveys sponsored by the Under Secretary of Defense for Personnel and Readiness.
- These surveys enable the DoD on a regular basis to quickly and accurately gauge the attitudes and opinions of the entire DoD community – active duty or Reserve component members and spouses, and DoD civilian employees – on the full range of personnel issues.

Why should I participate?
- This is your chance to be heard on issues that directly affect you.
- Some examples of topics include: quality of life, retention, retirement, and satisfaction.

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- Your answers on a survey make a difference. For example, results from previous surveys have played an important role in deliberations on pay rate adjustments, cost of living and housing allowances, and morale and retention programs.

How do I participate?

- To participate, you are asked to (1) read the Privacy Act Statement if you choose, (2) verify contact information, and (3) provide us e-mail address(es) so we can notify you when the survey is ready. We would appreciate your doing this step now. To participate now, click the Continue Now button.

How did you pick me?

- We use well-established, scientific procedures to select a sample that represents the Defense community.
- This sampling procedure sets up clusters of people based on combinations of demographic characteristics (e.g., Service, rank, etc.).
- You were selected at random from one of these clusters of people.

Why am I being asked to use the Web?

- Web administration enables us to get survey results to senior Defense leaders faster.

Why are you using a .net instead of a .mil domain to field your survey?

- When the SOFS program was established, a .net domain was chosen for two reasons.
  1. The SOFS operations contractor, Data Recognition Corp., consolidates both Web and paper survey data for DoD and it is more efficient for the Government to collect it at their single site.
  2. This makes it as easy as possible for everyone to access the survey, even from a non-government computer.

Do I have to take the survey in one sitting?

- No, it is not necessary to complete the survey in one sitting. Just click the "Save and Return Later" button and the work you completed will be saved.
- When you return to the survey, merely enter your Ticket Number again. Entering your Ticket Number will bring you to the place in the survey where you had stopped.

Why does the survey ask personal questions?

- The Defense Manpower Data Center (DMDC) traditionally reports not only overall results, but also results by race/ethnicity, paygrade, etc.
- To complete these analyses, we must ask respondents for this type of demographic information.
- Analyzing results in this way provides Defense leaders information about the attitudes and concerns of all subgroups of personnel (e.g., enlisted/officer, males/females) so that no groups are overlooked.
- Sensitive questions are sometimes also asked about topics like personal finances. Such information will be used to improve personnel policies, programs, and practices. As with all questions on the surveys, your responses will be held in confidence.

Will my answers be kept private?

- Your privacy will be safeguarded in accordance with the Privacy Act of 1974 (Public Law 93-579).
- Only group statistics will be reported. Individual data will not be reported.

Will I ever see the results of the survey?

- This survey's briefings and reports will be posted on the following Website:
  http://www.dmdc.osd.mil/surveys/
- When you complete a survey, you can request to be notified by e-mail when results are posted on the Web.

What is DMDC?

- DMDC maintains the largest archive of personnel, manpower, training, and financial data in DoD. It also conducts Joint-Service surveys and operates the Status of Forces Survey Program for the DoD. To learn more, visit the DMDC web site:
  http://www.dmdc.osd.mil/

How do I know this is an official, approved DoD survey?

- In accordance with DoD Directive 8910.1, all data collection in the Department must be licensed and show that license as a Report Control Symbol (RCS) with an expiration date. The RCS for the SOFS is DD-P&R(AR)2145, expiring 05/23/05.

What is ADSurvey@osd.pentagon.mil?

- The official e-mail address for communicating with active duty members about Status of Forces Surveys. The name is short for Active-Duty Survey.

How to Contact Us

- If you have questions or concerns about this survey, you have three ways to contact the Survey Operations Center:
  Call 1-800-881-5307
  Or
  E-mail us using the following link: ADSurvey@osd.pentagon.mil
  Or
  Send us a fax at 1-763-268-3011

BACKGROUND INFORMATION

1. **In what Service were you on active duty on July 26, 2004?**
   ☒ Army
   ☒ Navy   Branch of Service
   ☒ Marine Corps Measurement
   ☒ Air Force
   ☒ None, you were separated or retired

2. **Are you...?**
   ☒ Male   Gender Measurement
   ☒ Female

3. **What is your current paygrade?** *Mark one.*

   ☒ E-1   ☒ E-6   ☒ W-1   ☒ O-1/O-1E
   ☒ E-2   ☒ E-7   ☒ W-2   ☒ O-2/O-2E
   ☒ E-3   ☒ E-8   ☒ W-3   ☒ O-3/O-3E
   ☒ E-4   ☒ E-9   ☒ W-4   ☒ O-4
   ☒ E-5   ☒ W-5   ☒ O-5
                           ☒ O-6 or above

   Rank Measurment

4. **What is your marital status?**
   ☒ Married
   ☒ Separated
   ☒ Divorced
   ☒ Widowed
   ☒ Never married

5. [Ask if Q4 = "Divorced" OR Q4 = "Widowed" OR Q4 = "Never married"] **How many years have you been in a relationship with your current significant other (that is, girlfriend or boyfriend)?**
   ☒ Does not apply; I do not have a girlfriend/boyfriend
   ☒ Less than 1 year
   ☒ 1 year to less than 6 years
   ☒ 6 years to less than 10 years
   ☒ 10 years or more

In the following section, you will be asked question(s) about your spouse's employment status in enough detail to ensure comparability with national employment surveys.

6. [Ask if Q4 = "Married" OR Q4 = "Separated"] **Is your spouse currently serving on active duty (not a member of the National Guard or Reserve)?**
   ☒ Yes
   ☒ No

7. [Ask if (Q4 = "Married" OR Q4 = "Separated") AND Q6 = "No"] **Is your spouse currently serving as a member of the National Guard or Reserve in a full-time active duty program (AGR, TAR, AR)?**
   ☒ Yes
   ☒ No

8. [Ask if (Q4 = "Married" OR Q4 = "Separated") AND Q6 = "No" AND Q7 = "No"] **Is your spouse currently serving as a member of another type of National Guard or Reserve unit (e.g., drilling unit, IMA, IRR, military technician)?**
   ☒ Yes
   ☒ No

9. [Ask if (Q4 = "Married" OR Q4 = "Separated") AND Q6 = "No" AND Q7 = "No"] **Last week**, did your spouse do any work for pay or profit? Mark "Yes" even if your spouse worked only one hour, or helped without pay in a family business or farm for 15 hours or more.
   ☒ Yes
   ☒ No

10. [Ask if (Q4 = "Married" OR Q4 = "Separated") AND Q6 = "No" AND Q7 = "No" AND Q9 = "No"] **Last week**, was your spouse **temporarily** absent from a job or business?
    ☒ Yes, on vacation, temporary illness, labor dispute, etc.
    ☒ No

11. [Ask if (Q4 = "Married" OR Q4 = "Separated") AND Q6 = "No" AND Q7 = "No" AND Q9 = "No" AND Q10 = "No"] **Has your spouse been looking for work during the last 4 weeks?**
    ☒ Yes
    ☒ No

12. [Ask if (Q4 = "Married" OR Q4 = "Separated") AND Q6 = "No" AND Q7 = "No" AND Q9 = "No" AND Q10 = "No" AND Q11 = "Yes"] **Last week**, could your spouse have started a job if offered one, or returned to work if recalled?

☒ Yes, could have gone to work

☒ No, because of his/her temporary illness

☒ No, because of all other reasons (e.g., in school, etc.)

13. What is the highest degree or level of school that you have completed? *Mark the one answer that describes the highest grade or degree that you have completed.*

☒ 12 years or less of school (no diploma)

☒ High school graduate–high school diploma or equivalent (e.g., GED)

☒ Some college credit, but less than 1 year

☒ 1 or more years of college, no degree

☒ Associate's degree (e.g., AA, AS)

☒ Bachelor's degree (e.g., BA, AB, BS)

☒ Master's, doctoral, or professional school degree (e.g., MA, MS, MEng, MBA, MSW, PhD, MD, JD, DVM)

For the next questions, the definition of "child or children" or "other legal dependents" includes anyone in your family, except your spouse, who has or is eligible to have a Uniformed Services identification card (military ID card) or is eligible for military health care benefits and is enrolled in the Defense Enrollment Eligibility Reporting System (DEERS).

14. Do you have a child, children, or other legal dependents based on the definition above?

☒ Yes

☒ No

15. [Ask if Q14 = "Yes"] How many children or other legal dependents do you have in each age group? *Mark one answer in each row. To indicate none, select "0". To indicate nine or more, select "9".*

	0	1	2	3	4	5	6	7	8	9
a. 12 years or younger	○	○	○	○	○	○	○	○	○	○
b. 13 - 22 years old	○	○	○	○	○	○	○	○	○	○
c. 23 years or older	○	○	○	○	○	○	○	○	○	○

16. Are you Spanish/Hispanic/Latino?

☒ No, not Spanish/Hispanic/Latino

☒ Yes, Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, or other Spanish/Hispanic/Latino

17. What is your race? *Mark one or more races to indicate what you consider yourself to be.*

☒ White

☒ Black or African American

☒ American Indian or Alaska Native

☒ Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)

☒ Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian or Chamorro)

18. Where is your permanent duty station located?

☒ In one of the 50 states, DC, Puerto Rico, a U.S. territory or possession

☒ Europe (e.g., Bosnia-Herzegovina, Germany, Italy, Serbia, United Kingdom)

☒ Former Soviet Union (e.g., Russia, Tajikistan, Uzbekistan)

☒ East Asia and Pacific (e.g., Australia, Japan, Korea)

☒ North Africa, Near East or South Asia (e.g., Bahrain, Diego Garcia, Kuwait, Saudi Arabia)

☒ Sub-Saharan Africa (e.g., Kenya, South Africa)

☒ Western Hemisphere (e.g., Cuba, Honduras, Peru)

☒ Other or not sure

[Ask if Q18 = "In one of the 50 states, DC, Puerto Rico, a U.S. territory or possession"] Please select from the list below your permanent duty station location within one of the 50 states, DC, Puerto Rico, a U.S. territory or possession.

[▼]

[Ask if Q18 = "Other or not sure"] **Please enter the name of the country or installation.**

[   ]

19. Where do you live at your permanent duty station?

☒ Aboard ship

☒ Barracks/dorm/BEQ/UEPH/BOQ/UOPH military facility

☒ Military family housing, on base

☒ Military family housing, off base

☒ Privatized military housing that you rent on base

☒ Privatized military housing that you rent off base

☒ Civilian housing that you own or pay mortgage on

☒ Civilian housing that you rent

☒ Other

[Ask if Q19 = "Other"] **Please specify where you live at your permanent duty station.**

SATISFACTION AND RETENTION INTENTION

20. Taking all things into consideration, how satisfied are you, in general, with each of the following aspects of being in the military?

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
a.	Your total compensation (i.e., base pay, allowances, and bonuses)	☒	☒	☒	☒	☒
b.	The type of work you do in your military job	☒	☒	☒	☒	☒
c.	Your opportunities for promotion	☒	☒	☒	☒	☒
d.	The quality of your coworkers	☒	☒	☒	☒	☒
e.	The quality of your supervisor	☒	☒	☒	☒	☒

21. **Overall, how satisfied are you with the military way of life?**
    - ☒ Very satisfied
    - ☒ Satisfied
    - ☒ Neither satisfied nor dissatisfied
    - ☒ Dissatisfied
    - ☒ Very dissatisfied

    Job Satisfaction Measurement

22. How many years of active-duty service have you completed (including enlisted, warrant officer, and commissioned officer time)? *To indicate less than 1 year, enter "0". To indicate 35 years or more, enter "35".*

    [_____] Years

    Operations TEMPO will be defined by the number of days an individual has worked longer than the normal duty day and the number of nights an individual has been away from their permanent duty station due to military duties. This will include deployments, training exercises, and TDYs. Operations TEMPO will be measured using Items 28 and 29 in the survey.

23. **Suppose that you have to decide whether to stay on active duty. Assuming you could stay, how likely is it that you would choose to do so?**
    - ☒ Very likely
    - ☒ Likely
    - ☒ Neither likely nor unlikely
    - ☒ Unlikely
    - ☒ Very unlikely

    Turnover Intentions Measurement

24. [Ask if (Q4 = "Married" OR Q4 = "Separated") OR ((Q4 = "Divorced" OR Q4 = "Widowed" OR Q4 = "Never married") AND (Q5 = "Less than 1 year" OR Q5 = "1 year to less than 6 years" OR Q5 = "6 years to less than 10 years" OR Q5 = "10 years or more"))] **Does your spouse or significant other think you should stay on or leave active duty?**
    - ☒ Strongly favors staying
    - ☒ Somewhat favors staying
    - ☒ Has no opinion one way or the other
    - ☒ Somewhat favors leaving
    - ☒ Strongly favors leaving

25. **Does your family think you should stay on or leave active duty?**
    - ☒ Strongly favors staying
    - ☒ Somewhat favors staying
    - ☒ Has no opinion one way or the other
    - ☒ Somewhat favors leaving
    - ☒ Strongly favors leaving

TEMPO, READINESS, AND STRESS

26. **Have you ever PCSed?**
    - ☒ Yes
    - ☒ No

27. [Ask if Q26 = "Yes"] **How many months has it been since your last PCS?** *To indicate less than 1 month, enter "0". To indicate more than 99 months, enter "99".*

    [_____] Months

28. **In the past 12 months, how many times have you had to work longer than your normal duty day (i.e., overtime)?** *To indicate none, enter "0".*

    [_____] Days

    Work Hour Measurement

29. In the past 12 months, how many nights have you been away from your permanent duty station because of your military duties? *To indicate none, enter "0".*

[_____] Nights

Deployment, Training, and TDY Measurement

30. [Ask if Q29 > 0] Are you currently on deployment of 30 days or more?

   ☒ Yes

   ☒ No

31. [Ask if Q30 = "Yes"] Where are you currently deployed?

   ☒ In one of the 50 states, DC, Puerto Rico, a U.S. territory or possession

   ☒ Afghanistan

   ☒ Iraq

   ☒ Other North Africa, Near East or South Asia country (e.g., Bahrain, Diego Garcia, Kuwait, Saudi Arabia)

   ☒ Europe (e.g., Bosnia-Herzegovina, Germany, Italy, Serbia, United Kingdom)

   ☒ Former Soviet Union (e.g., Russia, Tajikistan, Uzbekistan)

   ☒ East Asia and Pacific (e.g., Australia, Japan, Korea)

   ☒ Sub-Saharan Africa (e.g., Kenya, Liberia, South Africa)

   ☒ Western Hemisphere (e.g., Cuba, Honduras, Peru)

   ☒ Other or not sure

   [Ask if Q31 = "In one of the 50 states, DC, Puerto Rico, a U.S. territory or possession"] Please select from the list below your deployment location within one of the 50 states, DC, Puerto Rico, and a U.S. territory or possession.

   [_____ ▼]

   [Ask if Q31 = "Other or not sure"] Please enter the name of the country or installation.

   [_____]

32. In the past 12 months, have you spent more or less time away from your permanent duty station than you expected when you first entered the military?

   ☒ Much more than expected

   ☒ More than expected

   ☒ Neither more nor less than expected

   ☒ Less than expected

   ☒ Much less than expected

33. What impact has time away (or lack thereof) from your permanent duty station in the past 12 months had on your military career intentions?

   ☒ Greatly increased your desire to stay

   ☒ Increased your desire to stay

   ☒ Neither increased nor decreased your desire to stay

   ☒ Decreased your desire to stay

   ☒ Greatly decreased your desire to stay

34. Overall, how well prepared are you to perform your wartime job?

   ☒ Very well prepared

   ☒ Well prepared

   ☒ Neither well nor poorly prepared

   ☒ Poorly prepared

   ☒ Very poorly prepared

35. Overall, how well prepared is your unit to perform its wartime mission?

   ☒ Very well prepared

   ☒ Well prepared

   ☒ Neither well nor poorly prepared

   ☒ Poorly prepared

   ☒ Very poorly prepared

36. How well has your training prepared you to perform your wartime job?

   ☒ Very well

   ☒ Well

   ☒ Neither well nor poorly

   ☒ Poorly

   ☒ Very poorly

37. Overall, how would your rate the current level of stress in your <u>work</u> life?
☒ Much less than usual
☒ Less than usual
☒ About the same as usual
☒ More than usual
☒ Much more than usual

38. Overall, how would you rate the current level of stress in your <u>personal</u> life?
☒ Much less than usual
☒ Less than usual
☒ About the same as usual
☒ More than usual
☒ Much more than usual

GLOBAL WAR ON TERRORISM

39. Since September 11, 2001, have you been deployed (i.e., away from your permanent duty station) for any operations in support of the Global War on Terrorism (GWOT)?

	Yes	No
a. Operation Noble Eagle	☒	☒
b. Operation Enduring Freedom	☒	☒
c. Operation Iraqi Freedom	☒	☒
d. Other	☒	☒

40. [Ask if Q39a = "Yes" OR Q39b = "Yes" OR Q39c = "Yes" OR Q39d = "Yes"] Since September 11, 2001, how many times have you been deployed in support of the GWOT?

[　　　　　　] Times

41. [Ask if Q39a = "Yes" OR Q39b = "Yes" OR Q39c = "Yes" OR Q39d = "Yes"] Since September 11, 2001, were you deployed to the following locations in support of the GWOT? *Mark "Yes" or "No" for each item.*

	Yes	No
a. In one of the 50 states, DC, Puerto Rico, a U.S. territory or possession	☒	☒
b. Afghanistan	☒	☒
c. Iraq	☒	☒

	Yes	No
d. Other North Africa, Near East or South Asia country (e.g., Bahrain, Diego Garcia, Kuwait, Saudi Arabia)	☒	☒
e. Europe (e.g., Bosnia-Herzegovina, Germany, Italy, Serbia, United Kingdom)	☒	☒
f. Former Soviet Union (e.g., Russia, Tajikistan, Uzbekistan)	☒	☒
g. East Asia and Pacific (e.g., Australia, Japan, Korea)	☒	☒
h. Sub-Saharan Africa (e.g., Kenya, Liberia, South Africa)	☒	☒
i. Western Hemisphere (e.g., Cuba, Honduras, Peru)	☒	☒
j. Other	☒	☒

[Ask if Q41a = "Yes"] Please select from the list below your deployment location within one of the 50 states, DC, Puerto Rico, a U.S. territory, or possession.

[　　　　　　　　　　　　　　　▼]

[Ask if Q41j = "Yes"] Please enter the name of the country or installation.

[　　　　　　　　　　　　　　　　]

42. [Ask if Q39a = "Yes" OR Q39b = "Yes" OR Q39c = "Yes" OR Q39d = "Yes"] Since September 11, 2001, what is the total number of days you have been away from your permanent duty station in support of the GWOT?

[　　　　　　] Days

43. [Ask if Q39a = "Yes" OR Q39b = "Yes" OR Q39c = "Yes" OR Q39d = "Yes"] Have you been deployed to a combat zone or an area where you drew imminent danger or hostile fire pay since September 11, 2001?
☒ Yes
☒ No

44. [Ask if (Q39a = "Yes" OR Q39b = "Yes" OR Q39c = "Yes" OR Q39d = "Yes") AND Q43 = "Yes"] How many days have you been deployed to a combat zone or an area where you drew imminent danger or hostile fire pay since September 11, 2001?

[　　　　　　] Days

45. [Ask if Q39a = "Yes" OR Q39b = "Yes" OR Q39c = "Yes" OR Q39d = "Yes"] **Were you involved in combat operations?**
    ☒ Yes
    ☒ No

46. [Ask if Q43 = "Yes"] **Are you still deployed to a combat zone or an area where you are drawing imminent danger or hostile fire pay?**
    ☒ Yes
    ☒ No

47. [Ask if Q39a = "Yes" OR Q39b = "Yes" OR Q39c = "Yes" OR Q39d = "Yes"] **Were any of your deployments since September 11, 2001 longer than what you expected?**
    ☒ Yes
    ☒ No

48. **Since September 11, 2001, have you been under stop-loss at any time?**
    ☒ Yes
    ☒ No

DETAILED RETENTION

49. **In which term of service are you serving now?**
    ☒ I am on indefinite status
    ☒ I am on stop loss
    ☒ I am an officer serving an obligation
    ☒ 1st enlistment or an extension of 1st enlistment
    ☒ 2nd or later enlistment including extensions

50. [Ask if Q49 = "I am an officer serving an obligation" OR Q49 = "1st enlistment or an extension of 1st enlistment" OR Q49 = "2nd or later enlistment including extensions"] **How much time remains in your current enlistment term (including extensions) or service obligation?**
    ☒ Less than 3 months
    ☒ 3 months to less than 7 months
    ☒ 7 months to less than 1 year
    ☒ 1 year to less than 2 years
    ☒ 2 years to less than 3 years
    ☒ 3 years or more

51. [Ask if Q3 = "E-1" OR "E-2" OR "E-3" OR "E-4" OR "E-5" OR "E-6" OR "E-7" OR "E-8" OR "E-9"] **At the end of your current enlistment, would the offer of a re-enlistment bonus affect your re-enlistment decision?**
    ☒ Does not apply, I will not be eligible to re-enlist (e.g., high year of tenure, age limits)
    ☒ Yes, I would re-enlist if the bonus was big enough
    ☒ No, I would re-enlist with or without a bonus
    ☒ No, I would not re-enlist regardless of the size of the bonus

52. [Ask if Q3 = "O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above"] **Would you be willing to accept an additional 3-year, active-duty service commitment if you were offered a monetary bonus?**
    ☒ Does not apply - I will have reached high year of tenure or maximum retirement age in less than 3 years
    ☒ Yes, I would accept a service commitment if the bonus was big enough
    ☒ No, I plan to continue to serve with or without a bonus
    ☒ No, I plan to separate as soon as I am eligible and no bonus would make me change my mind

53. [Ask if Q3 = ("E-1" OR "E-2" OR "E-3" OR "E-4" OR "E-5" OR "E-6" OR "E-7" OR "E-8" OR "E-9") and Q51 = "Yes, I would re-enlist if the bonus was big enough"] **What is the minimum re-enlistment bonus that you would accept for an additional 3-year enlistment?**
    [   ] Dollars

54. [Ask if Q3 = ("O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above") and Q52 = "Yes"] **What is the monetary bonus that you would accept for an additional 3-year active-duty service commitment?**
    [   ] Dollars

55. [Ask if Q22 <20] **If you could stay on active duty as long as you want, how likely is it that you would choose to serve in the military for at least 20 years?**
    ☒ Very likely
    ☒ Likely
    ☒ Neither likely nor unlikely
    ☒ Unlikely
    ☒ Very unlikely

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56. How have the reports of alleged prisoner abuse at Abu Ghraib affected your desire to continue to serve in the military?

☒ Greatly increased my desire to serve

☒ Increased my desire to serve

☒ Neither increased nor decreased my desire to serve

☒ Decreased my desire to serve

☒ Greatly decreased my desire to serve

57. When you finally leave active duty, how many total years of service do you expect to have? *To indicate less than one year, enter "0". To indicate thirty-five or more, enter "35".*

[_____] Years

58. Suppose that you have to decide whether to stay on active duty. Which of the following would be the most important factor in this decision? *Select one item from the list below.*

☒ Quality of the work environment based on unit morale, camaraderie, and professionalism

☒ Quality of leadership

☒ Choice of jobs

☒ Level of challenge in your job

☒ Sense of accomplishment from doing your job

☒ Opportunities to be assigned to station of choice

☒ Availability and quality of government-issued equipment to do your job

☒ Rotational assignments

☒ Level of integrity in your unit

☒ Amount of personal and family time you have

☒ Amount of time you spend away from your home station (e.g., deployments, field training exercises)

☒ Job security

☒ Opportunities for career advancement

☒ Opportunities for training and professional development

☒ Opportunity for retraining

☒ Opportunities for stabilized tours (i.e., more time between PCS moves)

☒ Annual leave

☒ Dental insurance for your family

☒ Service Members Group Life Insurance (SGLI)

☒ Emergency relief societies (e.g., Air Force Aid Society, Army Emergency Relief, Navy Marine Corps Relief)

☒ Off-duty educational opportunities

☒ Opportunities to travel

☒ Space available travel

☒ Thrift savings plan

☒ Pride in serving your country

☒ Military values, lifestyle, and tradition

☒ Other non-monetary incentives

[Ask if Q58 = "Other non-monetary incentives"]
Please specify other non-monetary incentives.

[_____]

59. **Which of the following would be the <u>second most</u> important factor in this decision?**

☒ Quality of the work environment based on unit morale, camaraderie, and professionalism

☒ Quality of leadership

☒ Choice of jobs

☒ Level of challenge in your job

☒ Sense of accomplishment from doing your job

☒ Opportunities to be assigned to station of choice

☒ Availability and quality of government-issued equipment to do your job

☒ Rotational assignments

☒ Level of integrity in your unit

☒ Amount of personal and family time you have

☒ Amount of time you spend away from your home station (e.g., deployments, field training exercises)

☒ Job security

☒ Opportunities for career advancement

☒ Opportunities for training and professional development

☒ Opportunity for retraining

☒ Opportunities for stabilized tours (i.e., more time between PCS moves)

☒ Annual leave

☒ Dental insurance for your family

☒ Service Members Group Life Insurance (SGLI)

☒ Emergency relief societies (e.g., Air Force Aid Society, Army Emergency Relief, Navy Marine Corps Relief)

☒ Off-duty educational opportunities

☒ Opportunities to travel

☒ Space available travel

☒ Thrift savings plan

☒ Pride in serving your country

☒ Military values, lifestyle, and tradition

☒ Other non-monetary incentives

[Ask if Q59 = "Other non-monetary incentives"] **Please specify other non-monetary incentives.**

60. **Which of the following would be the <u>third most</u> important factor in this decision?**

☒ Quality of the work environment based on unit morale, camaraderie, and professionalism

☒ Quality of leadership

☒ Choice of jobs

☒ Level of challenge in your job

☒ Sense of accomplishment from doing your job

☒ Opportunities to be assigned to station of choice

☒ Availability and quality of government-issued equipment to do your job

☒ Rotational assignments

☒ Level of integrity in your unit

☒ Amount of personal and family time you have

☒ Amount of time you spend away from your home station (e.g., deployments, field training exercises)

☒ Job security

☒ Opportunities for career advancement

☒ Opportunities for training and professional development

☒ Opportunity for retraining

☒ Opportunities for stabilized tours (i.e., more time between PCS moves)

☒ Annual leave

☒ Dental insurance for your family

☒ Service Members Group Life Insurance (SGLI)

☒ Emergency relief societies (e.g., Air Force Aid Society, Army Emergency Relief, Navy Marine Corps Relief)

☒ Off-duty educational opportunities

☒ Opportunities to travel

☒ Space available travel

☒ Thrift savings plan

☒ Pride in serving your country

☒ Military values, lifestyle, and tradition

☒ Other non-monetary incentives

[Ask if Q60 = "Other non-monetary incentives"] **Please specify other non-monetary incentives.**

61. What is most important to you in your career decisions? *Please specify.*

[ ]

62. During the past 6 months, have you done any of the following to explore the possibility of <u>leaving</u> the military? *Mark "Yes" or "No" for each item.*

		Yes	No
a.	Thought seriously about leaving the military	☒	☒
b.	Wondered what life might be like as a civilian	☒	☒
c.	Discussed leaving and/or civilian opportunities with family members or friends	☒	☒
d.	Talked about leaving with your immediate supervisor	☒	☒
e.	Gathered information on education programs or colleges	☒	☒
f.	Gathered information about civilian job options (e.g., read newspaper ads, attended a job fair)	☒	☒
g.	Attended a program that helps people prepared for civilian employment	☒	☒
h.	Prepared a resume	☒	☒
i.	Applied for a job	☒	☒
j.	Interviewed for a job	☒	☒

63. If you were to leave active duty in the next 12 months, what would be your primary activity?
☒ Attend college or university
☒ Work for a civilian company or organization
☒ Work in a civilian government job (local, state, or federal)
☒ Manage or work in family business
☒ Self-employed in your own business or profession
☒ A homemaker/housewife/househusband
☒ Go into full-time retirement
☒ Not sure
☒ Other

64. When you leave active duty, how likely is it that you will join a National Guard or Reserve unit?
☒ Very likely
☒ Likely
☒ Neither likely nor unlikely
☒ Unlikely
☒ Very unlikely
☒ Does not apply, retiring or otherwise ineligible

DEPLOYMENTS

65. When you first entered the military were you told that...

		Definitely yes	Probably yes	Not sure	Probably not	Definitely not
a.	It was possible that you would be deployed during your time in service?	☒	☒	☒	☒	☒
b.	It was possible that you would be deployed to hostile or dangerous locations during your time in service?	☒	☒	☒	☒	☒

66. When you first entered the military, how likely did you think it was that you would be deployed in the first 4 years?
☒ Very likely
☒ Likely
☒ Neither likely nor unlikely
☒ Unlikely
☒ Very unlikely

67. When you first entered the military, how likely did you think it was that you would be deployed in your career?
☒ Very likely
☒ Likely
☒ Neither likely nor unlikely
☒ Unlikely
☒ Very unlikely

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68. When you first entered the military, how likely did you think it was that you would be deployed to dangerous places in the first 4 years?

☒ Very likely

☒ Likely

☒ Neither likely nor unlikely

☒ Unlikely

☒ Very unlikely

69. When you first entered the military, how likely did you think it was that you would be deployed to dangerous places in your career?

☒ Very likely

☒ Likely

☒ Neither likely nor unlikely

☒ Unlikely

☒ Very unlikely

70. In your career, how many times have you been deployed for 30 days or more?

[   ] Times

71. [Ask if Q70 > 0] In your career, how many times have you been deployed to hostile locations for 30 days or more?

[   ] Times

72. How has the number of non-hostile deployments (or lack thereof) impacted your desire to stay in the military?

☒ Greatly increased your desire to stay

☒ Increased your desire to stay

☒ Neither increased nor decreased your desire to stay

☒ Decreased your desire to stay

☒ Greatly decreased your desire to stay

73. [Ask if Q72 = "Greatly increased your desire to stay" OR Q72 = "Increased your desire to stay" OR Q72 = "Decreased your desire to stay" OR Q72 = "Greatly decreased your desire to stay"] Is this (your change in desire to stay) because there were too few or too many non-hostile deployments?

☒ Too few

☒ Too many

74. How has the number of hostile deployments (or lack thereof) impacted your desire to stay in the military?

☒ Greatly increased your desire to stay

☒ Increased your desire to stay

☒ Neither increased nor decreased your desire to stay

☒ Decreased your desire to stay

☒ Greatly decreased your desire to stay

75. [Ask if Q74 = "Greatly increased your desire to stay" OR Q74 = "Increased your desire to stay" OR Q74 = "Decreased your desire to stay" OR Q74 = "Greatly decreased your desire to stay"] Is this (your change in desire to stay) because there were too few or too many hostile deployments?

☒ Too few

☒ Too many

76. [Ask if Q70 > 0] How satisfied were you with the care your family received during your most recent deployment?

☒ Very satisfied

☒ Satisfied

☒ Neither satisfied nor dissatisfied

☒ Dissatisfied

☒ Very dissatisfied

☒ Does not apply, I did not have a spouse or other dependents during my most recent deployment

ASSIGNMENTS

77. [Ask if Q4 = "Married" OR Q4 = "Separated" OR Q4 = "Divorced" OR Q4 = "Widowed" OR Q14 = "Yes"] Have you ever been stationed overseas with your family?

☒ Yes

☒ No

78. [Ask if (Q4 = "Married" OR Q4 = "Separated" OR Q4 = "Divorced" OR Q4 = "Widowed" OR Q14 = "Yes") AND Q77 = "Yes"] How many separate times have you been stationed overseas with your family?

[   ] Times

79. [Ask if Q4 = "Married" OR Q4 = "Separated" OR Q4 = "Divorced" OR Q4 = "Widowed" OR Q14 = "Yes"] **Have you ever been stationed overseas _without_ your family?**

☒ Yes

☒ No

80. [Ask if (Q4 = "Married" OR Q4 = "Separated" OR Q4 = "Divorced" OR Q4 = "Widowed" OR Q14 = "Yes") AND Q79 = "Yes"] **How many separate times have you been stationed overseas _without_ your family?**

[_____] Times

ORGANIZATIONAL COMMITMENT

81. **How much do you agree or disagree with each of the following statements?**

Organizational Commitment Measure

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
a. I enjoy serving in the military	☒	☒	☒	☒	☒
b. Serving in the military is consistent with my personal goals	☒	☒	☒	☒	☒
c. If I left the military, I would feel like I'm starting all over again	☒	☒	☒	☒	☒
d. I would feel guilty if I left the military	☒	☒	☒	☒	☒
e. Generally, on a day-to-day basis, I am happy with my life in the military	☒	☒	☒	☒	☒
f. It would be difficult for me to leave the military and give up the benefits that are available in the Service	☒	☒	☒	☒	☒
g. I would not leave the military right now because I have a sense of obligation to the people in it	☒	☒	☒	☒	☒
h. I really feel as if the military's values are my own	☒	☒	☒	☒	☒
i. I would have difficulty finding a job if I left the military	☒	☒	☒	☒	☒
j. Generally, on a day-to-day basis, I am proud to be in the military	☒	☒	☒	☒	☒
k. If I left the military, I would feel like I had let my country down	☒	☒	☒	☒	☒
l. I continue to serve in the military because leaving would require considerable sacrifice	☒	☒	☒	☒	☒
m. I feel like being a member of the military can help me achieve what I want in life	☒	☒	☒	☒	☒
n. One of the problems with leaving the military would be the lack of available alternatives	☒	☒	☒	☒	☒
o. I am committed to making the military my career	☒	☒	☒	☒	☒

SATISFACTION WITH ASPECTS OF MILITARY LIFE

82. **How satisfied are you with each of the following aspects of military life?**

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
a. Type of assignments received	☒	☒	☒	☒	☒
b. Frequency of PCS moves	☒	☒	☒	☒	☒
c. Deployments	☒	☒	☒	☒	☒
d. Other military duties that take you away from your permanent duty station	☒	☒	☒	☒	☒
e. Military values, lifestyle, and tradition	☒	☒	☒	☒	☒
f. Amount of enjoyment from your job	☒	☒	☒	☒	☒
g. Your personal workload	☒	☒	☒	☒	☒
h. Pace of your promotions	☒	☒	☒	☒	☒
i. Training and professional development	☒	☒	☒	☒	☒
j. Off-duty educational opportunities	☒	☒	☒	☒	☒
k. Job security	☒	☒	☒	☒	☒
l. Amount of personal and family time you have	☒	☒	☒	☒	☒

83. How would you rate your current level of morale?

☒ Very high

☒ High

☒ Moderate

☒ Low

☒ Very low

84. How would you rate the current level of morale in your unit?

☒ Very high

☒ High

☒ Moderate

☒ Low

☒ Very low

85. Indicate the extent to which you agree or disagree with the following statements about your unit.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. Service members in your unit really care about each other	☒	☒	☒	☒	☒
b. Service members in your unit work well as a team	☒	☒	☒	☒	☒
c. Service members in your unit pull together to get the job done	☒	☒	☒	☒	☒
d. Service members in your unit trust each other	☒	☒	☒	☒	☒

MEMBER'S HEALTH

86. During the past 30 days, on how many days did you drink alcohol?

☒ 28 to 30 days (about every day)

☒ 20 to 27 days (about 5 to 6 days a week on average)

☒ 11 to 19 days (3 to 4 days a week on average)

☒ 4 to 10 days (1 to 2 days a week on average)

☒ 2 to 3 days

☒ Once

☒ Did not drink any alcohol in the past 30 days

87. [Ask if Q86 = "Once" OR Q86 = "2 to 3 days" OR Q86 = "4 to 10 days (1 to 2 days a week on average)" OR Q86 = "11 to 19 days (3 to 4 days a week on average)" OR Q86 = "20 to 27 days (about 5 to 6 days a week on average)" OR Q86 = "28 to 30 days (about every day)"] When you drank alcohol in the past 30 days, about how many drinks did you typically have? (By "drink," we mean a bottle or can of beer, a wine cooler or glass of wine, a shot of liquor, or a mixed drink or cocktail.)

☒ 10 or more drinks

☒ 8 to 9 drinks

☒ 6 to 7 drinks

☒ 5 drinks

☒ 4 drinks

☒ 2 to 3 drinks

☒ 1 drink

☒ Less than 1 drink

88. [Ask if Q2 = "Male" AND (Q86 = "Once" OR Q86 = "2 to 3 days" OR Q86 = "4 to 10 days (1 to 2 days a week on average)" OR Q86 = "11 to 19 days (3 to 4 days a week on average)" OR Q86 = "20 to 27 days (about 5 to 6 days a week on average)" OR Q86 = "28 to 30 days (about every day)")] During the past 30 days, on how many days did you have 5 or more drinks of beer, wine, or liquor on the same occasion? (By "drink," we mean a bottle or can of beer, a wine cooler or a glass of wine, a shot of liquor, or a mixed drink or cocktail. By "occasion," we mean at the same time or within a couple of hours of each other.)

☒ 28 to 30 days (about every day)

☒ 20 to 27 days (about 5 to 6 days a week on average)

☒ 11 to 19 days (3 to 4 days a week on average)

☒ 4 to 10 days (1 to 2 days a week on average)

☒ 2 to 3 days

☒ Once

☒ Never

89. [Ask if Q2 = "Female" AND (Q86 = "Once" OR Q86 = "2 to 3 days" OR Q86 = "4 to 10 days (1 to 2 days a week on average)" OR Q86 = "11 to 19 days (3 to 4 days a week on average)" OR Q86 = "20 to 27 days (about 5 to 6 days a week on average)" OR Q86 = "28 to 30 days (about every day)")] During the past 30 days, on how many days did you have 4 or more drinks of beer, wine, or liquor on the same occasion? (By "drink," we mean a bottle or can of beer, a wine cooler or a glass of wine, a shot of liquor, or a mixed drink or cocktail. By "occasion," we mean at the same time or within a couple of hours of each other.)

☒ 28 to 30 days (about every day)

☒ 20 to 27 days (about 5 to 6 days a week on average)

☒ 11 to 19 days (3 to 4 days a week on average)

☒ 4 to 10 days (1 to 2 days a week on average)

☒ 2 to 3 days

☒ Once

☒ Never

90. Think about the past 30 days. How many cigarettes did you usually smoke on a typical day?

☒ About 3 or more packs a day (more than 55 cigarettes)

☒ About 2 ½ packs a day (46-55 cigarettes)

☒ About 2 packs a day (36-45 cigarettes)

☒ About 1 ½ packs a day (26-35 cigarettes)

☒ About 1 pack a day (16-25 cigarettes)

☒ About ½ pack a day (6-15 cigarettes)

☒ 1-5 cigarettes a day

☒ Less than 1 cigarette a day, on the average

☒ Did not smoke any cigarettes in the past 30 days

91. During the past 30 days, on average how often have you used chewing tobacco, snuff, or other smokeless tobacco?

☒ About every day

☒ 5-6 days a week

☒ 3-4 days a week

☒ 1-2 days a week

☒ 1-3 days in the past 30 days

☒ Did not use any in the past 30 days

☒ Never used smokeless tobacco

92. During the past 30 days, how many days did you run, jog, bicycle or walk briskly or hike for 20 minutes or more?

[_____] Days

During the past 30 days, how many days did you engage in 20 minutes or more in other strenuous physical activity (e.g., handball, soccer, racquet sports, swimming laps)?

[_____] Days

93. In thinking about your weight, do you consider yourself to be:

☒ Overweight?

☒ About the right weight?

☒ Underweight

COMPENSATION

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94. [Ask if Q22 < 20] Assume you will retire after 20 years or more of military service. If you had the choice between the present retirement system or an alternative system where you would receive an additional $100 basic pay per month for the remainder of your career, with retirement pay that would be reduced by $200 a month, which would you choose?

☒ Present retirement system

☒ Alternative retirement system with an additional $100 in basic pay per month and retirement pay reduced by $200 per month

95. [Ask if Q22 < 20 AND Q94 = "Present retirement system"] Assume you will retire after 20 years or more of military service. If you had the choice between the present retirement system or an alternative system where you would receive an additional $125 basic pay per month for the remainder of your career, with retirement pay that would be reduced by $200 a month, which would you choose?

☒ Present retirement system

☒ Alternative retirement system with an additional $125 in basic pay per month and retirement pay reduced by $200 per month

96. [Ask if Q22 < 20 AND Q94 = "Alternative retirement system with an additional $100 in basic pay per month and retirement pay reduced by $200 per month"] **Assume you will retire after 20 years or more of military service. If you had the choice between the present retirement system or an alternative system where you would receive an additional $75 basic pay per month for the remainder of your career, with retirement pay that would be reduced by $200 a month, which would you choose?**

☒ Present retirement system

☒ Alternative retirement system with an additional $75 in basic pay per month and retirement pay reduced by $200 per month

97. [Ask if Q22 < 20 AND Q94 = "Present retirement system" AND Q95 = "Present retirement system"] **Assume you will retire after 20 years or more of military service. If you had the choice between the present retirement system or an alternative system where you would receive an additional $150 basic pay per month for the remainder of your career, with retirement pay that would be reduced by $200 a month, which would you choose?**

☒ Present retirement system

☒ Alternative retirement system with an additional $150 in basic pay per month and retirement pay reduced by $200 per month

98. [Ask if Q22 < 20 AND Q94 = "Alternative retirement system with an additional $100 in basic pay per month and retirement pay reduced by $200 per month" AND Q96 = "Alternative retirement system with an additional $75 in basic pay per month and retirement pay reduced by $200 per month"] **Assume you will retire after 20 years or more of military service. If you had the choice between the present retirement system or an alternative system where you would receive an additional $50 basic pay per month for the remainder of your career, with retirement pay that would be reduced by $200 a month, which would you choose?**

☒ Present retirement system

☒ Alternative retirement system with an additional $50 in basic pay per month and retirement pay reduced by $200 per month

99. [Ask if Q22 < 20 AND Q94 = "Present retirement system" AND Q95 = "Present retirement system" AND Q97 = "Present retirement system"] **Assume you will retire after 20 years or more of military service. If you had the choice between the present retirement system or an alternative system where you would receive an additional $175 basic pay per month for the remainder of your career, with retirement pay that would be reduced by $200 a month, which would you choose?**

☒ Present retirement system

☒ Alternative retirement system with an additional $175 in basic pay per month and retirement pay reduced by $200 per month

100. [Ask if Q22 < 20 AND Q94 = "Alternative retirement system with an additional $100 in basic pay per month and retirement pay reduced by $200 per month" AND Q96 = "Alternative retirement system with an additional $75 in basic pay per month and retirement pay reduced by $200 per month" AND Q98 = "Alternative retirement system with an additional $50 in basic pay per month and retirement pay reduced by $200 per month"] **Assume you will retire after 20 years or more of military service. If you had the choice between the present retirement system or an alternative system where you would receive an additional $25 basic pay per month for the remainder of your career, with retirement pay that would be reduced by $200 a month, which would you choose?**

☒ Present retirement system

☒ Alternative retirement system with an additional $25 in basic pay per month and retirement pay reduced by $200 per month

101. [Ask if Q22 < 20 AND Q94 = "Present retirement system" AND Q95 = "Present retirement system AND Q97 = "Present retirement system" AND Q99 = "Present retirement system"] **Assume you will retire after 20 years or more of military service. If you had the choice between the present retirement system or an alternative system where you would receive an additional $200 basic pay per month for the remainder of your career, with retirement pay that would be reduced by $200 a month, which would you choose?**

☒ Present retirement system

☒ Alternative retirement system with an additional $200 in basic pay per month and retirement pay reduced by $200 per month

102. [Ask if Q3 = ("E-1" OR "E-2" OR "E-3" OR "E-4" OR "E-5" OR "E-6" OR "E-7" OR "E-8" OR "E-9") AND Q22 < 20] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an E-7 with 20 years of service your monthly retired pay would be about $1,600 per month. Would you choose this amount from the day you retire or $150,000 as a lump sum and $1,600 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $150,000 lump sum and $1,600 per month starting at age 62

103. [Ask if Q3 = ("O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above") AND Q22 < 20] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an O-5 with 20 years of service your monthly retired pay would be about $3,200 per month. Would you choose this amount from the day you retire or $275,000 as a lump sum and $3,200 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $275,000 lump sum and $3,200 per month starting at age 62

104. [Ask if Q3 = ("E-1" OR "E-2" OR "E-3" OR "E-4" OR "E-5" OR "E-6" OR "E-7" OR "E-8" OR "E-9") AND Q22 < 20 AND Q102 = "Present retirement system"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an E-7 with 20 years of service your monthly retired pay would be about $1,600 per month. Would you choose this amount from the day you retire or $200,000 as a lump sum and $1,600 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $200,000 lump sum and $1,600 per month starting at age 62

105. [Ask if Q3 = ("O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above") AND Q22 < 20 AND Q103 = "Present retirement system"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an O-5 with 20 years of service your monthly retired pay would be about $3,200 per month. Would you choose this amount from the day you retire or $325,000 as a lump sum and $3,200 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $325,000 lump sum and $3,200 per month starting at age 62

106. [Ask if Q3 = ("E-1" OR "E-2" OR "E-3" OR "E-4" OR "E-5" OR "E-6" OR "E-7" OR "E-8" OR "E-9") AND Q22 < 20 AND Q102 = "Present retirement system" AND Q104 = "Present retirement system"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an E-7 with 20 years of service your monthly retired pay would be about $1,600 per month. Would you choose this amount from the day you retire or $250,000 as a lump sum and $1,600 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $250,000 lump sum and $1,600 per month starting at age 62

107. [Ask if Q3 = ("O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above") AND Q22 < 20 AND Q103 = "Present retirement system" AND Q105 = "Present retirement system"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an O-5 with 20 years of service your monthly retired pay would be about $3,200 per month. Would you choose this amount from the day you retire or $375,000 as a lump sum and $3,200 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $375,000 lump sum and $3,200 per month starting at age 62

108. [Ask if Q3 = ("E-1" OR "E-2" OR "E-3" OR "E-4" OR "E-5" OR "E-6" OR "E-7" OR "E-8" OR "E-9") AND Q22 < 20 AND Q102 = "Present retirement system" AND Q104 = "Present retirement system" AND Q106 = "Present retirement system"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an E-7 with 20 years of service your monthly retired pay would be about $1,600 per month. Would you choose this amount from the day you retire or $300,000 as a lump sum and $1,600 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $300,000 lump sum and $1,600 per month starting at age 62

109. [Ask if Q3 = ("O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above") AND Q22 < 20 AND Q103 = "Present retirement system" AND Q105 = "Present retirement system" AND Q107 = "Present retirement system"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an O-5 with 20 years of service your monthly retired pay would be about $3,200 per month. Would you choose this amount from the day you retire or $425,000 as a lump sum and $3,200 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $425,000 lump sum and $3,200 per month starting at age 62

110. [Ask if Q3 = ("E-1" OR "E-2" OR "E-3" OR "E-4" OR "E-5" OR "E-6" OR "E-7" OR "E-8" OR "E-9") AND Q22 < 20 AND Q102 = "Alternative retirement system with a $150,000 lump sum and $1,600 per month starting at age 62"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an E-7 with 20 years of service your monthly retired pay would be about $1,600 per month. Would you choose this amount from the day you retire or $125,000 as a lump sum and $1,600 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $125,000 lump sum and $1,600 per month starting at age 62

111. [Ask if Q3 = ("O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above") AND Q22 < 20 AND Q103 = "Alternative retirement system with a $275,000 lump sum and $3,200 per month starting at age 62"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an O-5 with 20 years of service your monthly retired pay would be about $3,200 per month. Would you choose this amount from the day you retire or $250,000 as a lump sum and $3,200 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $250,000 lump sum and $3,200 per month starting at age 62

112. [Ask if Q3 = ("E-1" OR "E-2" OR "E-3" OR "E-4" OR "E-5" OR "E-6" OR "E-7" OR "E-8" OR "E-9") AND Q22 < 20 AND Q102 = "Alternative retirement system with a $150,000 lump sum and $1,600 per month starting at age 62" AND Q110 = "Alternative retirement system with a $125,000 lump sum and $1,600 per month starting at age 62"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an E-7 with 20 years of service your monthly retired pay would be about $1,600 per month. Would you choose this amount from the day you retire or $100,000 as a lump sum and $1,600 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $100,000 lump sum and $1,600 per month starting at age 62

113. [Ask if Q3 = ("O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above") AND Q22 < 20 AND Q103 = "Alternative retirement system with a $275,000 lump sum and $3,200 per month starting at age 62" AND Q111 = "Alternative retirement system with a $250,000 lump sum and $3,200 per month starting at age 62"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an O-5 with 20 years of service your monthly retired pay would be about $3,200 per month. Would you choose this amount from the day you retire or $225,000 as a lump sum and $3,200 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $225,000 lump sum and $3,200 per month starting at age 62

114. [Ask if Q3 = ("E-1" OR "E-2" OR "E-3" OR "E-4" OR "E-5" OR "E-6" OR "E-7" OR "E-8" OR "E-9") AND Q22 < 20 AND Q102 = "Alternative retirement system with a $150,000 lump sum and $1,600 per month starting at age 62" AND Q110 = "Alternative retirement system with a $125,000 lump sum and $1,600 per month starting at age 62" AND Q112 = "Alternative retirement system with a $100,000 lump sum and $1,600 per month starting at age 62"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an E-7 with 20 years of service your monthly retired pay would be about $1,600 per month. Would you choose this amount from the day you retire or $75,000 as a lump sum and $1,600 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $75,000 lump sum and $1,600 per month starting at age 62

115. [Ask if Q3 = ("O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above") AND Q22 < 20 AND Q103 = "Alternative retirement system with a $275,000 lump sum and $3,200 per month at age 62" AND Q111 = "Alternative retirement system with a $250,000 lump sum and $3,200 per month starting at age 62" AND Q113 = "Alternative retirement system with a $225,000 lump sum and $3,200 per month starting at age 62"] **Assuming you will retire after 20 years or more of service, would you rather have the present retirement system or an alternative that provides a lump sum payment and a pension starting at age 62? For example, if you retired today as an O-5 with 20 years of service your monthly retired pay would be about $3,200 per month. Would you choose this amount from the day you retire or $200,000 as a lump sum and $3,200 starting at age 62?**

☒ Present retirement system

☒ Alternative retirement system with a $200,000 lump sum and $3,200 per month starting at age 62

116. [Ask if Q4 = "Married" OR Q4 = "Separated" OR Q14 = "Yes"] **Assuming there are no deployment pays (i.e., family separation pay), how much additional monthly pay would be needed for you to volunteer to go to a CONUS school for one year or less without your family?**

	Dollars

117. [Ask if Q4 = "Married" OR Q4 = "Separated" OR Q14 = "Yes"] **Assuming there are no deployment pays (i.e., family separation pay and hazardous duty pay), how much additional monthly pay would be needed for you to go OCONUS without your family for a tour to Germany or Europe?**

	Dollars

118. [Ask if Q4 = "Married" OR Q4 = "Separated" OR Q14 = "Yes"] **Assuming there are no deployment pays (i.e., family separation pay and hazardous duty pay), how much additional monthly pay would be needed for you to go OCONUS on a dependent restricted tour to a place like Korea?**

	Dollars

119. **Assuming there are no deployment pays (i.e., family separation pay and hazardous duty pay), how much additional monthly pay would be needed for you to go to an operationally dangerous place such as Iraq?**

	Dollars

120. Suppose you had a choice between a 3-year assignment where deployments would be unlikely and another 3-year assignment where deployments were likely. Which one would you choose?

☒ The assignment where deployments were unlikely

☒ The assignment where deployments were likely

121. [Ask if Q120 = "The assignment where deployments were unlikely"] **Suppose you had a choice between a 3-year assignment where deployments were unlikely and no special pay or a 3-year assignment where deployments were likely and for which you would receive a special pay of $100 per month. Which one would you choose?**

☒ The assignment where deployments were unlikely and no special pay

☒ The assignment where deployments were likely and for which you would receive a special pay of $100 per month

122. [Ask if Q120 = "The assignment where deployments were unlikely" AND Q121 = "The assignment where deployments were unlikely and no special pay"] **Suppose you had a choice between a 3-year assignment where deployments were unlikely and no special pay or a 3-year assignment where deployments were likely and for which you would receive a special pay of $200 per month. Which one would you choose?**

☒ The assignment where deployments were unlikely and no special pay

☒ The assignment where deployments were likely and for which you would receive a special pay of $200 per month

123. [Ask if Q120 = "The assignment where deployments were unlikely" AND Q121 = "The assignment where deployments were unlikely and no special pay" AND Q122 = "The assignment where deployments were unlikely and no special pay"] **Suppose you had a choice between a 3-year assignment where deployments were unlikely and no special pay or a 3-year assignment where deployments were likely and for which you would receive a special pay of $300 per month. Which one would you choose?**

☒ The assignment where deployments were unlikely and no special pay

☒ The assignment where deployments were likely and for which you would receive a special pay of $300 per month

124. Suppose you had a choice between an assignment that had no additional duties such as security officer or equipment custodian, and another assignment with these types of duties. Which one would you choose?

☒ The assignment with no additional duties

☒ The assignment with additional duties

125. [Ask if Q124 = "The assignment with no additional duties"] **Suppose you had a choice between an assignment that had no additional duties such as security officer or equipment custodian, and another assignment with these types of duties which had a special pay of $50 per month. Which one would you choose?**

☒ The assignment with no additional duties and no special pay

☒ The assignment with additional duties and special pay of $50 per month

126. [Ask if Q124 = "The assignment with no additional duties" AND Q125 = "The assignment with no additional duties and no special pay"] **Suppose you had a choice between an assignment that had no additional duties such as security officer or equipment custodian, and another assignment with these types of duties which had a special pay of $75 per month. Which one would you choose?**

☒ The assignment with no additional duties and no special pay

☒ The assignment with additional duties and special pay of $75 per month

127. [Ask if Q124 = "The assignment with no additional duties" AND Q125 = "The assignment with no additional duties and no special pay" AND Q126 = "The assignment with no additional duties and no special pay"] **Suppose you had a choice between an assignment that had no additional duties such as security officer or equipment custodian, and another assignment with these types of duties which had a special pay of $100 per month. Which one would you choose?**

☒ The assignment with no additional duties and no special pay

☒ The assignment with additional duties and special pay of $100 per month

128. Suppose that upon retirement you had a choice between retired pay that was $200 a month higher and no health insurance or the present package of retired pay and Tricare for Life. Would you select the retired pay that was $200 a month higher with no health insurance?

☒ Yes, retired pay that was $200 a month higher with no health insurance

☒ No, present package of retired pay and Tricare

for Life

129. [Ask if Q128 = "No, present package of retired pay and Tricare for Life"] **Suppose that upon retirement you had a choice between retired pay that was $300 a month higher and no health insurance or the present package of retired pay and Tricare for Life. Would you select the retired pay with no health insurance?**

☒ Yes, retired pay that was $300 a month higher with no health insurance

☒ No, present package of retired pay and Tricare for Life

130. [Ask if Q128 = "No, present package of retired pay and Tricare for Life" AND Q129 = "No, present package of retired pay and Tricare for Life"] **Suppose that upon retirement you had a choice between retired pay that was $400 a month higher and no health insurance or the present package of retired pay and Tricare for Life. Would you select the retired pay with no health insurance?**

☒ Yes, retired pay that was $400 a month higher with no health insurance

☒ No, present package of retired pay and Tricare for Life

131. **What were your <u>total</u> military earnings in 2003? (Please include all allowances, special pays, basic pay, and bonuses. Exclude spouse earnings.)**
You can enter an amount here:

	Dollars

Or, if you prefer, you can enter a range here. My <u>total</u> military earnings were at least:

	Dollars

but no more than:

	Dollars

132. **What amount would you need to earn in the civilian world to maintain your current standard of living? In your calculations, make sure to include the employee share for health insurance and the employee contribution to retirement.**

	Dollars

133. **Some allowances, like the Basic Allowance for Housing (BAH) and family separation allowance, vary based on family/dependency status. Do you believe this is appropriate?**

☒ Yes

☒ No

134. **Should compensation vary with family/dependency status for those who are in a combat zone?**

☒ Yes

☒ No

135. **Have you or your spouse used any of the following financial services in the past 12 months? *Mark "Yes" or "No" for each item.***

		Yes	No
a.	Payday lender	☒	☒
b.	Rent to buy	☒	☒
c.	Automobile title pawn	☒	☒
d.	Tax refund application loan	☒	☒

136. [Ask if Q135a = "Yes"] **How many times did you roll-over your initial payday loan?**

	Times

137. [Ask if Q3 = "O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above"] **The Department of Defense has been considering the elimination of the "up-or-out" rule for officers, thereby allowing officers passed over for promotion to stay on active duty. What impact do you believe such a policy change to "up-or-stay" would have on the morale of the officer corps, as whole?**

☒ Definitely improve morale

☒ Probably improve morale

☒ Neither improve nor lower morale

☒ Probably lower morale

☒ Definitely lower morale

138. [Ask if Q3 = "O-1/O-1E" OR "O-2/O-2E" OR "O-3/O-3E" OR "O-4" OR "O-5" OR "O-6 or above"] **What impact do you believe a policy change to "up-or-stay" would have on the quality of the officer corps, as whole?**

☒ Definitely improve quality

☒ Probably improve quality

☒ Neither improve nor lower quality

☒ Probably lower quality

☒ Definitely lower quality

121

TRANSITION ASSISTANCE PROGRAM

139. In 1992, the Services began offering programs to assist Service members in making the transition to civilian life. Does your current permanent duty station offer such a program?

☒ Yes

☒ No

☒ Don't know

140. When you leave Service, how likely is it that you will enroll in a Service-sponsored program to assist you in transitioning to civilian life?

☒ Very likely

☒ Likely

☒ Neither likely nor unlikely

☒ Unlikely

☒ Very unlikely

TAKING THE SURVEY

141. Where did you take this survey? *Mark "Yes" or "No" for each item.*

		Yes	No
a.	Home/barracks	☒	☒
b.	Work/office	☒	☒
c.	Installation/ship library	☒	☒
d.	Installation/ship recreation center	☒	☒
e.	Other non-military location (e.g., public library, cyber café)	☒	☒
f.	Deployed location (on land)	☒	☒
g.	On a deployed ship	☒	☒
h.	On board a ship at sea on regular duty	☒	☒
i.	On board a ship in port	☒	☒
j.	TDY or training location (non-deployment)	☒	☒

142. Which of the following computers did you use to take the survey? *Mark "Yes" or "No" for each item.*

		Yes	No
a.	Government computer	☒	☒
b.	Privately-owned computer	☒	☒
c.	Public computer (e.g., library or café)	☒	☒

		Yes	No
d.	Other	☒	☒

143. If you have comments or concerns that you were not able to express in answering this survey, please enter them in the space provided. Any comments you make on this questionnaire will be kept confidential, and no follow-up action will be taken in response to any specifics reported.

144. Thank you for participating in the DoD August 2004 Status of Forces Survey of Active-Duty Members. There are no more questions on this survey. If you would like to receive a message advising you of when and where the results will be available, please provide your e-mail address. Your address will only be used for this purpose.

Vita

Captain Nathan P. Olsen graduated from Broomfield High School in Broomfield, Colorado. He entered undergraduate studies at the United States Air Force Academy in Colorado Springs, Colorado where he graduated with a Bachelor of Science degree in Civil Engineering in May 2003. He was commissioned through the United States Air Force Academy where he was nominated for a Regular Commission. His first assignment was at Laughlin AFB as project manager and chief of maintenance engineering. While stationed at Laughlin, he deployed overseas in July 2005 to Baghdad, Iraq as a project manager for Multi-National Security Transition Command Iraq. In August 2006, he entered the Graduate School of Engineering and Management, Air Force Institute of Technology. Upon graduation, he will be assigned to Scott AFB.

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14. ABSTRACT
Recent information in the field of Operations Tempo (OPTEMPO) has resulted in conflicting information on its effect on turnover intentions. This study evaluated the August 2004 Status of Forces Survey to determine if the sample demonstrated OPTEMPO had a curvilinear effect on turnover intentions when accounting for the moderators job satisfaction and organizational commitment while controlling for rank and gender. Linear regressions were used to determine if the relationship between OPTEMPO and turnover intentions were significant. When accounting for job satisfaction and organizational commitment the relationship between OPTEMPO and turnover intentions is not significant, this indicated that OPTEMPO and turnover intentions do not have a curvilinear relationship. The findings of this study led to further research questions which implied that the sample demonstrated a slight significant relationship between OPTEMPO and turnover intentions. Overall, the study demonstrated that the relationship between OPTEMPO and turnover intentions in the presence of job satisfaction and organizational commitment is not significant and has no impact.

15. SUBJECT TERMS
Curvilinear, Deployment, Employee Turnover, Job Satisfaction, Military Personnel, Personnel Retention, Retention (General), Turnover

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